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Give Me a T for Taxes! How Belief in a Just World and Personal
Relative Deprivation Influence Tax Compliance

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Michael Genner BSc

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Abstract (English)

The justice motive describes an individual's motivation to act on perceived threats to justice, in order to restore it, either externally by taking action, or internally by constructing justifications. Several decades of research have found the justice motive to be linked with various domains of human experience and behavior. This study aimed to investigate a link between the justice motive and tax compliance. The justice motive was operationalized through the constructs belief in a just world and personal relative deprivation. Belief in a just world was differentiated into general belief in a just world and personal belief in a just world. Tax compliance was operationalized through noncompliance measures – tax avoidance and tax evasion. Simple moderation models were constructed, in which negative relationships between personal relative deprivation and tax compliance are weakened by belief in a just world. A convenience sample of 339 self-employed participants was procured with social media, word of mouth, and professional associations and networks. Participation occurred via an online survey, which was conducted in English and German over a period of five months. A link between personal relative deprivation and tax evasion was found, but no other effects could be substantiated regarding the study hypotheses. Some exploratory results yielded promising avenues for future research, such as a significant positive correlation between general belief in a just world and tax avoidance, and a strong moderating effect of general belief in a just world, reversing the relationship of personal relative deprivation on tax avoidance.

Keywords: tax compliance, justice motive, belief in a just world, relative deprivation

Abstract (German)

Das Gerechtigkeitsmotiv beschreibt die Motivation eines Individuums, auf die wahrgenommene Bedrohung von Gerechtigkeit zu reagieren, um diese wiederherzustellen. Dies kann entweder external, durch aktives Handeln geschehen oder internal, durch die Konstruktion von Rechtfertigungen. In den letzten Jahrzehnten konnten zahlreiche Verbindungen zwischen dem Gerechtigkeitsmotiv und diversen Bereichen menschlichen Erlebens und Verhaltens belegt werden. Diese Studie hatte zum Ziel, eine mögliche Verbindung zwischen dem Gerechtigkeitsmotiv und Steuerehrlichkeit zu untersuchen. Das Gerechtigkeitsmotiv wurde durch die Konstrukte Glaube an eine gerechte Welt und persönliche relative Deprivation operationalisiert. Der Glaube an eine gerechte Welt wurde differenziert in den Glauben an eine allgemein gerechte Welt und den Glauben an eine persönlich gerechte Welt. Steuerehrlichkeit wurde mittels Skalen für Steuerunehrlichkeit operationalisiert – Steuervermeidung und Steuerhinterziehung. Einfache Moderationsmodelle wurden erstellt, in welchen negative Zusammenhänge zwischen persönlicher relativer Deprivation und Steuerehrlichkeit durch den Glauben an eine gerechte Welt verringert werden. Eine Gelegenheitsstichprobe in der Größe von 339 selbstständig beschäftigten Teilnehmer*innen wurde mithilfe von sozialen Medien, Mundpropaganda sowie Berufsnetzwerken rekrutiert. Die Teilnahme an der Studie erfolgte mittels Online-Befragung über einen Zeitraum von fünf Monaten. Ein Zusammenhang zwischen persönlicher relativer Deprivation und Steuerhinterziehung wurde gefunden, allerdings konnten abgesehen davon keine anderen Effekte hinsichtlich der Studienhypothesen belegt werden. Einige Ergebnisse der Exploration lieferten vielversprechende Ausgangspunkte für die weitere Forschung, wie etwa eine signifikante Korrelation zwischen dem Glauben an eine allgemein gerechte Welt und Steuervermeidung sowie ein starker Moderationseffekt des Glaubens an eine allgemein gerechte Welt, welcher den Zusammenhang zwischen persönlicher relativer Deprivation und Steuervermeidung umkehrt.

Schlagworte: Steuerehrlichkeit, Gerechtigkeitsmotiv, Glaube an eine gerechte Welt, relative Deprivation

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I remember distinctly when I first consciously thought about the idea of paying one's taxes gladly. It was in the Ö1 radio show *Im Gespräch*, when Renata Schmidtkunz interviewed T. C. Boyle in 2015. They talked about his new novel and Renata Schmidtkunz pointed out that one of the characters in it would frequently say that she had “no contract with this state”. Renata Schmidtkunz said that she herself – as a European and German-Austrian citizen – would say: “I am the state”. T. C. Boyle asked her whether she was always happy to pay her taxes and her reply was swift and immediate: *Yes, she was*. As long as she received good healthcare, good schools, and social justice in return. This simple statement had a profound impact on me. I wanted to know what leads some people to see the state as a part of themselves, and others to perceive it as a foreign, maybe even hostile entity. It seemed that in order to identify with the state – or society in general – one has to believe in its fundamental legitimacy and justness. Also, it became clear to me from their exchange that the notion that *we all* are the state is not self-evident to everybody. I began to realize what social psychologists have known and studied for decades: that there are differentiating factors – economic, cultural, psychological – which can potentially explain one's attitudes towards contributing to society. The interview surfaced in my mind many times during the conception of this thesis, which is why I quoted from it in the epigraph.

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Ich sage ihnen etwas, T. C.: ich bin glücklich, Steuern zahlen zu können, und zwar solange ich im Gegenzug ein gutes Gesundheitssystem, gute Schulen, soziale Gerechtigkeit bekomme.

—Renata Schmidtkunz, *Im Gespräch*, 2015

1 Introduction

Most developed countries today generate the greatest part of their public revenue through taxation. According to Mourre and Reut (2019), tax revenue accounted for almost nine-tenths of total revenue in the EU as a whole in 2014. Taxes are a prerequisite for sustainable growth in developing countries (Choudhary et al., 2024). A benchmark that is typically used for assessing a country’s ability to raise sufficient taxes is the proportion of tax income relative to its GDP, i.e. the tax-to-GDP ratio. With some exceptions, notably Switzerland and Saudi Arabia, high income countries have higher tax-to-GDP ratios than low income countries (Okunogbe & Tourek, 2024).

Taxes are being differentiated by the European Commission into categories of their economic functions, such as taxes on consumption, taxes on labour, taxes on capital, environmental taxes, taxes on property, and taxes on energy (European Commission & Directorate-General for Taxation and Customs Union, 2024). Non-tax sources of state income can be categorized into EU funds, income from financial assets, and fees for public services (see Mourre & Reut, 2019). Another example of non-tax revenue are royalties levied on the extraction of publicly owned natural resources, which, as is being argued by Ridd (1992), are more akin to a charge for a good than to a tax. The question of how specific taxes – or taxation in general – are *justified* often arises in the public discourse. As Gangl (2019) points out, “taxes are a daily ‘hot’ topic in our society, on which the fairness of the system is judged. Taxes fuel social protest movements (e.g., Occupy Wall Street in the US) and influence elections (e.g., Brexit in the UK)” (p. 185).

Taxes can be described as an insurance-like fee levied by the state for providing protection of one’s property and personal safety. They can also be viewed as a necessary sacrifice every member of society must make – according to their ability – in order to enable societal functioning (see Kirchler & Hoelzl, 2018). Furthermore, arguments for the legitimacy of taxation are frequently provided with respect to their overall purposes, such as

- (1) providing government functions (also called “state building”) such as government infrastructure and military; (2) providing other public goods and services;
- (3) creating greater equality through redistributive functions; and (4) guiding behaviour in society (as tax can serve to provide guidance as to acceptable and unacceptable behaviour). (Pistone et al., 2019, p. 3)

As an example for guiding behavior through tax-driven disincentives, one can think of a government introducing or raising taxes on tobacco or alcohol, in order to disincentivize the consumption of these substances. Another example, on a larger scale, are carbon taxes, which aim to make global costs of carbon emissions *visible*, while at the same time incentivizing emission reduction. Taxes are essential tools for reaching social and economic goals in modern societies. They are necessary for the state (or other forms of polity) to perform its functions, such as governance, providing physical and social security, infrastructure, market engagement, and so on. In addition to that, one of the responsibilities of the state is to prepare for periods of crises, such as the 2007–2008 financial crisis or the COVID-19 pandemic, during which it provides balancing measures by enacting countercyclical fiscal policies. Counteracting measures by the state in times of low economic growth can, for example, be realized through either tax cuts or government spending. Strictly speaking, neither of the aforementioned measures require the state to collect revenue beforehand – Jacobs (2014) points out that

taxation has not always been the chief source of revenue for governments. Although the primary goal of taxation is to provide the resources necessary to fund governmental expenditures, any taxing authority that has the power to control the money supply . . . can satisfy its revenue needs merely by creating money. However, complete reliance on this governmental power would stimulate excess demand in the economy, which in turn would cause price inflation. (p. 727)

Perhaps the greatest justification for taxes is that in democracies citizens collectively decide on taxation by participating in the democratic process, thereby giving legitimacy to the tax system both as a whole and its specific configuration. In summary, the role taxation has in providing the state with the means of fulfilling its responsibilities cannot be discounted – it is indispensable for the state to function.

However, individual taxpayers – and corporations for that matter – differ in their willingness to pay their taxes *voluntarily*. Frameworks and models such as the economic theory of criminal behavior describe noncompliance as a function of *gain* resulting from compliance and *expected cost*, such as risk of punishment, severity of punishment, and other related factors. An attempt at explaining tax compliance specifically is the influential model of income tax evasion by Allingham and Sandmo (1972), which presumes compliance decisions to be guided by four central economical parameters: *income*, *tax rate*, *audit probability*, and *fine level*; and taxpayers are assumed to be guided by the objective of maximizing their own economic benefit. As groundbreaking and initially promising as they were, these models were able to explain and predict compliance behavior only in part. These early models of behavioral economics and social psychology aimed to explain compliance behavior through the assumption of purely rational economic reasoning. A perfectly rational individual will eval-

uate their options, using all available information for weighing probabilities of gain against the risk of punishment. If the odds are such that the risk of punishment is above a certain threshold, they will comply with the law. On the other hand, if the probability of reward is sufficiently higher than the risk of being punished, they will instead engage in behavior that serves their own best self-interest. However, this is not a realistic description of average human behavior. If individuals were always striving to maximize their own self-interest, compliance rates would be much lower than observed. Instead, individuals make compliance decisions based on both economic-rational *and* psychological factors, such as attitudes, personal and societal norms, and justice considerations (Alm et al., 2012). In more recent years, compliance research began to focus more on this array of explanatory factors, with a special focus on relationships between the various stakeholders in the tax process. These include taxpayers and how they view other taxpayers, their relationship with tax accountants, tax authorities, and the government. This paradigm shift in the scientific study of compliance led to the development of frameworks which integrate economic predictors of compliance with psychological predictors. For example, the slippery-slope framework of tax compliance by Kirchler et al. (2008) describes compliance decisions as a function of power of authorities and trust bestowed upon authorities by taxpayers.

It is important to note that the way taxpayers' motivations are viewed influences regulatory decisions by policy makers. If taxpayers are assumed to be always striving to maximize their own self-interest, the only way of achieving compliance is by deterring from noncompliance through frequent auditing and sanctions. One of several problems with that approach is that control and punishment are *expensive*, and might not always yield the intended outcome – more compliance. For example, the bomb crater effect describes the phenomenon that taxpayers behave less compliant shortly after an audit (Mittone, 2006). They do so possibly because they assume the risk of another audit in the near future as less likely, or because they choose to engage in game-playing, in which they try to win back their loss. Furthermore, as for example K. Murphy (2004) points out, this style of regulation (also called *deterrence approach*) does not acknowledge that voluntary compliance occurs frequently, and in many situations. The criticism of this regulatory viewpoint subsequently led to the proposition of *responsive regulation* by Ayres and Braithwaite (1992). The main idea of this approach is that there is not one best regulatory approach which should be applied to all stakeholders. Instead, authorities should make flexible and deliberate choices, responding to different stakeholders according to their individual characteristics and behavior. While a purely lenient, or *accommodative* approach fails to account for those individual taxpayers who will take advantage of it, responsive regulation combines accommodation and deterrence into a synergistic model (see K. Murphy, 2004). Complementary to that, the slippery-slope framework (Kirchler et al., 2008) and its extension (Gangl et al., 2019) propose that actions by the state can be described as having impacts on two dimensions

relevant for compliance: *trust* of citizens in the authority, and *power* of the authority. The slippery-slope framework suggests that *voluntary* tax compliance – as opposed to *enforced* tax compliance – is maximized when the state provides a relationship climate among the involved stakeholders that is characterized by trust and collaboration. One of the things tax authorities need to do in order to achieve such a climate is to act in a way that taxpayers perceive themselves and other taxpayers being treated according to principles of justice. From the perspective of tax collection efficiency, it makes sense to investigate the underlying psychological factors that lead to voluntary cooperation and compliance. The aim of this thesis is to broaden the understanding of these factors by investigating tax compliance in the context of the justice motive, which describes a person’s fundamental disposition to form attitudes and act based on fairness and equity considerations. Lerner (1977) discusses the justice motive, including a theoretical overview regarding its emergence and forms, and constructs the justice motive from the notion of a *personal contract*. The central assumption of this concept is that children at an early age learn that, depending on their acting or not acting in accordance with prescribed behavior, one or another outcome results from their actions. This forms a contract between the child and its environment, which builds upon *deservingness*, i.e. the child is entitled to receive a given outcome, depending on their adherence to the rules. Importantly, Lerner (1977) postulates that the personal contract stands at the core of goal-seeking for many individuals, because without it, one can hardly be sure that one’s actions will be rewarded according to societal standards. Another assumption is that the personal contract is a prerequisite for psychological stability: one can be safe in the “knowledge” that other people in one’s environment will adhere to the norms and standards of society because they, too, will be rewarded for their virtuous actions and potentially punished for their misdeeds. Central to the notion of the justice motive is that people are motivated to act against any evidence that could pose a threat to the existence of this contract. This can occur in two basic forms: (1) changing the environment by actively working against sources of wrongful or undeserved outcomes or (2) changing one’s interpretation of the world in such a way that any evidence against the personal contract is invalidated.

1.1 Research Question

This thesis aims to investigate the justice motive as a possible predictor for tax compliance. The justice motive is being operationalized (1) via the *belief in a just world* construct, which describes the motivation of individuals to maintain their belief in a fair and predictable world; and (2) via the construct of *personal relative deprivation*, which describes a disadvantaged social comparison process, that involves a cognitive-affective appraisal, and the belief of being unfairly deprived compared to others.

In social psychology, justice and fairness considerations have been commonly distin-

guished in three areas: *distributive justice*, *procedural justice*, and *retributive justice* (Tyler & Smith, 1998). Expanding on these areas, Wenzel (2003) proposed a conceptual framework of justice dimensions, which includes three analytic levels of justice: *individual*, *group*, and *societal*. Previous research has shown that respect, fairness and equity considerations play a vital role for taxpayer cooperation with authorities – for example, Kogler et al. (2015) found that procedural and distributive justice predicted voluntary tax compliance, mediated by trust; Levi and Sacks (2009) established a link between perceptions of procedural justice and the acceptance of government’s right to levy taxes; Hartner et al. (2008) found that procedural justice increased motivational postures of deference towards the tax authority; and Hartner (2009) found associations between distributive justice, several measures of tax compliance, and their respective underlying motivational postures. In the context of this study, it is important to note that previous studies investigating links between the justice motive and tax compliance in many instances focused on perceptions of justice and fairness as attributes of the tax system specifically, such as *fair treatment* by the tax office (e.g. Hartner et al., 2008; K. Murphy, 2003), or of adjacent justice-related determinants, such as *wage inequity* (e.g. Dezső et al., 2022). Complementary to that, this study explores the justice motive in its more general and basal form. To be more precise, the belief in a just world and personal relative deprivation tell us nothing about perceptions of individuals regarding justice and fairness as attributes of the tax authority in particular, but rather point to general justice-related perceptions, motivations, and beliefs. Because of the more generalized operationalizations of the justice motive utilized in this thesis, its research question is not readily localizable in the Wenzel (2003) framework (at least not beyond the fact that it investigates individual taxpayers – as opposed to groups or society as a whole).

Central to the idea of the justice motive is the concept of *restorative action*, which originates from the motivation to act upon a perceived threat to a just world. As mentioned above, one way of restoring justice is by actively repairing the injustice. However, that is not always possible, and another form of restorative action is then sometimes put to use: by a *reinterpretation* of the situation that threatened one’s belief in justice, the belief in the justness of it can be regained. For example, observers of a situation in which an innocent victim is receiving unjust punishment could (1) interfere with the situation in order to ease the victim’s suffering or, if they are unable to do that – they could (2) devalue and reject the victim, thereby construing the victim as being “deserving” of the punishment (Lerner & Simmons, 1966).

In the context of tax compliance, this means that for individuals who perceive injustice in their own lives, for example through the belief of being deprived economically in comparison to similar others, it is reasonable to assume that being subject to taxation could potentiate this feeling of deprivation. At the same time, an attainable means for restoring justice is provided: by engaging in noncompliant behavior, economic deprivation can be reduced,

resulting in greater equity. However, the same goal of restoring justice could be achieved through an *internal construction* of justice – a reinterpretation of the situation as being just – which would limit the influence of deprivation and therefore reduce noncompliance. An individual could construct an image of the tax system as fair by, for example, focusing on public services and goods that are financed by taxation. This would result in a more positive view of taxation in terms of *exchange equity*, which “concerns the perceived value of tax-funded government benefits and services received relative to one’s tax contribution” (Wenzel, 2003, p. 44). The main idea is that the individual exposed to a perceived threat to justice can reduce the threat by either focusing on existing attributes countering their initial assessment, or by constructing them.

1.2 Tax Compliance

1.2.1 Definition

For the purposes of this study, compliance is defined as the willingness of individuals, whether it be voluntarily or through enforcement, to comply with both the letter and the spirit of the tax law. It needs mentioning, however, that other definitions exist, and no single definition of tax compliance can claim to be accepted universally. Regarding the question of how to best conceptualize it, James and Alley (2002) state that

The definition of tax compliance in its most simple form is usually cast in terms of the degree to which taxpayers comply with the tax law. However like many such concepts, the meaning of compliance can be seen almost as a continuum of definitions. This ranges from the narrow law enforcement approach, through wider economic definitions and on to even more comprehensive versions relating to taxpayer decisions to conform to the wider objectives of society as reflected in tax policy. (p. 29)

Gangl et al. (2019), in their qualitative study, differentiate tax compliance into distinct categories, such as *tax honesty*, *tax evasion*, *tax avoidance*, *accepting tax behavior*, and *stalling tax behavior*. James and Alley (2002) discuss several different approaches of defining tax compliance, broadly differentiated into an *economic* and a *behavioral* approach.

The economic approach conceptualizes compliance in terms of the *tax gap*, which describes the disparity between tax actually collected and true tax liability. In terms of the tax gap, it does not matter whether tax collection was achieved through voluntary compliance or through enforcement. For example, the EU publishes a yearly report which includes estimates of the value-added tax (VAT) compliance gap for all EU countries (see European Commission & Directorate-General for Taxation and Customs Union, 2024). The 2024 report states that, in 2021, the average VAT gap amounted to 5.3%. The VAT gap ranged

between -0.2% (Netherlands) and 36.7% (Romania), with Austria presenting a below-average VAT gap of 2.8% . Not all countries conduct a tax gap estimation – according to R. Murphy (2019), only fifteen EU member states did so in 2019. If a tax gap was estimated, it was, in almost all cases, the VAT compliance gap – and only four states estimated a tax gap for *income tax*: Estonia, Italy, Latvia, and United Kingdom. For this investigation, it was attempted to obtain estimates for the income tax gap specifically for Austria, but a literature research yielded no results.

In the behavioral approach, on the other hand, tax compliance is described by James and Alley (2002) as the “voluntary willingness to act in accordance with the spirit as well as the letter of tax law” (p. 33). As mentioned above, in this thesis the behavioral definition is being adapted in order to accommodate both *voluntary* and *enforced* compliance, and to account for both legal and illegal tax noncompliance.

1.2.2 Predictors of Tax Compliance

Alm et al. (2012) present a list of determinant categories of tax compliance, which are being differentiated into *economic* and *psychological* determinants. Economic determinants listed by the authors are *frequency of audits*, *finances*, *marginal tax rate*, *income*, and *opportunity to avoid or to evade taxes*, whereas psychological determinants are *complexity of tax law*, *attitudes*, *personal norms*, *social norms*, *societal norms*, *distributive justice*, *procedural justice*, and *retributive justice*. In their analysis regarding the current state of the field of tax psychology, Gangl (2019) points out that current and past research, for the most part, does not explore interactions between these determinants, but rather examines them separately.

The following examples aim to give a brief overview on determinants of tax compliance from previous research. Regarding income and tax rate, research yielded mixed or ambiguous results (see Alm et al., 2012). Gangl et al. (2016) suggested tax compliance to be indirectly associated with patriotism by way of patriotism fostering voluntary cooperation with the state. A link between tax compliance and the perception of tax-related media coverage, more specifically, the portrayal of tax authorities’ attributes on the trust and power dimensions, was demonstrated by Kasper et al. (2015). Furthermore, tax compliance has been linked to intentional wage inequity (Dezső et al., 2022), audit frequency (Beer et al., 2019), and audit effectiveness (Kasper & Alm, 2022). In addition to that, it is important to note that other factors, such as the complexity of tax legislation, can influence compliance as well: as Kirchler (2007, p. 12) argues, “uncertainty in the tax law makes it difficult for both taxpayers to follow the law and tax authorities to decide unequivocally what is legal and what is at the fringe of tax law”. It follows that individual taxpayers might not always act noncompliant out of ill will, but because tax laws are oftentimes not easily interpretable for the average citizen. This can potentially lead not only to misinterpretations of what correct conduct is supposed to be, but also to frustration with what can be perceived as

unnecessarily complicated regulations. Finally, it is worth noting that the process of paying taxes was found to be associated with adverse emotional experiences, such as self-blame and anger, but positive emotions as well (Enachescu et al., 2019). However, for instance Enachescu et al. (2021) found no differences in tax compliance between groups of *elicited* emotions in an experimental setting.

1.3 Belief in a Just World

1.3.1 Definition

The belief in a just world describes the disposition of individuals to see the world as inherently fair, and thus predictable (Hafer & Bègue, 2005; Lerner, 1980; Lerner & Simmons, 1966). It can be described as a cognitive bias with the central assumption that, generally, bad things happen to bad people and good things to good people, despite this obviously being at odds with reality (Furnham, 2003). In other words, the belief in a just world states that people receive what they deserve and, vice versa, that people deserve what happens to them. Hafer et al. (2005) point out that “people sometimes go to great lengths to maintain their belief that the world is just”, since without a belief in a just world, “investment in any but the most immediate goals is pointless” (p. 442).

Lerner (1980) states that belief in a just world theory describes the phenomenon that, even if a person objectively is not at fault for an adverse event, observers will – in some situations – reinterpret either the event itself, its outcome, its cause, or even the character of the victim, in order to protect their belief in a just world:

People want to and have to believe they live in a just world so that they can go about their daily lives with a sense of trust, hope, and confidence in their future. If it is true that people want or need to believe that they live in a world where people get what they deserve, then it is not surprising that they will find ways, other things being equal, to interpret events to fit this belief. (p. 14)

In the same publication, several explanatory mechanisms for the reinterpretation of events to fit one’s belief in a just world have been formulated, such as *generalization* of previously observed situations in which people were truly themselves at fault for their misfortune and *morality tales* rooted in culture and religion. On a more general note, it is being argued that the belief in a just world might be intertwined with human motivation and our ability to pursue goals in a fundamental way.

First conceptualized by Lerner and Simmons (1966), belief in a just world initially aimed to explain how individuals reconcile themselves to the existence of cruelty and suffering around them. Lerner (1980) states that the belief in a just world “refers to those more or less articulated assumptions which underlie the way people orient themselves to their

environment. These assumptions have a functional component which is tied to the image of a manageable and predictable world” (p. 9). As stated above, the belief in a just world can be described as a cognitive bias – it is sometimes referred to as the just world fallacy – which can serve as a predictor for both social behavior and mental health (Kong et al., 2021). Although originally conceptualized as a one-dimensional construct, belief in a just world currently is most commonly differentiated in two dimensions: personal belief in a just world (see Dalbert, 1999) and general belief in a just world (see Dalbert, 1999; Kong et al., 2021).

1.3.2 Outcomes and Consequences

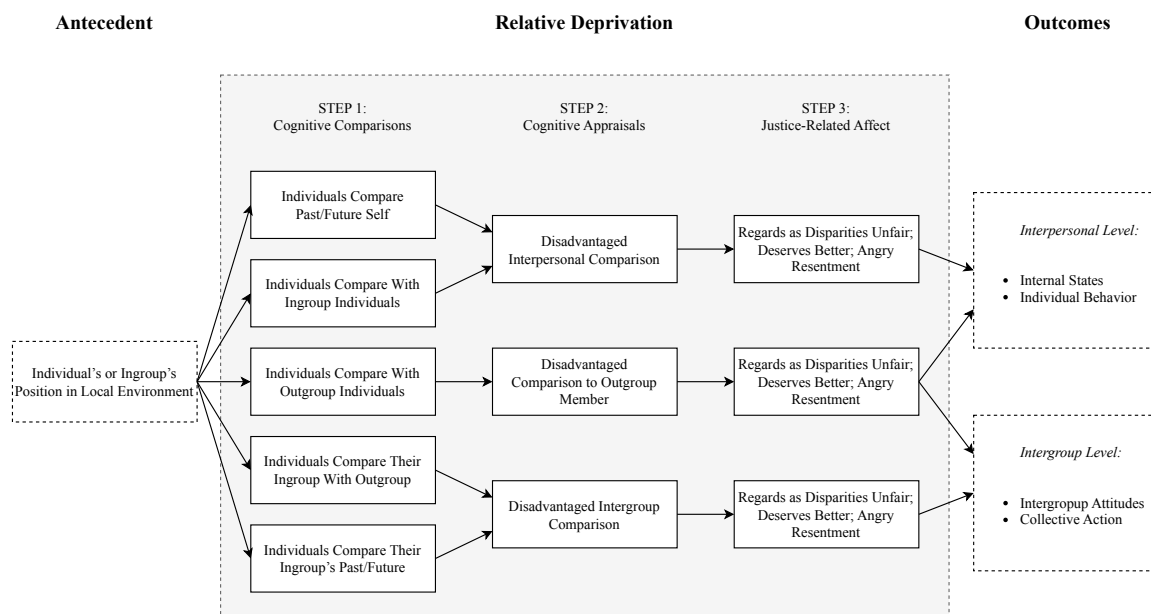
Belief in a just world has been linked to life satisfaction (Münscher, 2022; Xiong & Zou, 2022), interpersonal trust (Bègue, 2002), societal fairness (Barreiro et al., 2019), institutional trust (Barreiro et al., 2019; Li et al., 2022; Zhang & Zhang, 2015), need for achievement (Tripathi et al., 2022), conscientiousness (Nudelman & Otto, 2021), agreeableness (Nudelman, 2013), extraversion (Nudelman, 2013), internal locus of control (Nudelman & Otto, 2021), but also with victim derogation (De Judicibus & McCabe, 2001; Lerner & Simmons, 1966; Valor-Segura et al., 2011). Furthermore, belief in a just world has been found to be *negatively* correlated with antisociality (Kong et al., 2021), neuroticism (Nudelman, 2013), social anxiety (Xiong & Zou, 2022), scarcity mindset (Tripathi et al., 2022), greed (Tripathi et al., 2022), and relative deprivation (Xiong et al., 2022; Xiong & Zou, 2022). Christandl (2013) found that personal belief in a just world reduced the perceived economic impact of adverse economic events, thereby serving as a personal resource in threatening situations. Münscher (2022) reports a negative correlation between academic cheating and personal belief in a just world, although the effect was fully mediated by perception of just behavior by lecturers, fellow students, and procrastination. In the same paper, the authors also report a *positive* correlation between general belief in a just world and academic cheating.

1.4 Relative Deprivation

1.4.1 Definition

Relative deprivation refers to the belief of an individual that they – or their ingroup – are unfairly disadvantaged relative to comparable others, causing anger and resentment (Smith et al., 2012). The concept of relative deprivation has first been described by Stouffer et al. (1949) in the context of several large-scale survey studies investigating attitudes of American soldiers serving in the Second World War. Central to the development of relative deprivation was an attempt to explain the paradoxical observation that sometimes objectively advantaged groups were less satisfied than groups who were relatively disadvantaged.

Figure 1: Outline of Relative Deprivation Theory



Note. A visual outline of relative deprivation theory, with antecedents, outcomes, and required sequential steps. Adapted with permission from “Relative Deprivation: A Theoretical and Meta-Analytic Review” by H. J. Smith, T. F. Pettigrew, G. M. Pippin, and S. Bialosiewicz, 2012, *Personality and Social Psychology Review*, 16/3, 205. Copyright 2012 by the Society for Personality and Social Psychology, Inc.

For example, in the survey studies, air corpsmen were less satisfied with their promotion opportunities than military police, despite promotions in the military police being less frequent. Relative deprivation theory attempts to explain these anomalies by introducing the idea that satisfaction depends on which comparisons are available and how salient they are: air corpsmen did not compare themselves to military police, but to other air corpsmen – the more immediate and therefore salient comparison – and vice versa.

Smith et al. (2012) present a model (see figure 1) that defines relative deprivation in three sequential steps: (1) an individual must make a comparison, (2) the individual must appraise cognitively that they (or their ingroup) are disadvantaged, and (3) the individual must perceive this disadvantage as unjust, which leads to anger and resentment. Again, it is important to distinguish relative deprivation from objective measures of deprivation, such as assessing deprivation on a macro level, e.g. by comparing an individual's income to the national median income. Whether individuals experience relative deprivation depends on whom they (consciously or unconsciously) choose to compare themselves to, therefore it is to be treated as a *subjective* phenomenon explaining *individual* behavior.

Smith et al. (2012) differentiate between three comparison types: The first type describes *interpersonal comparisons* with other ingroup members, or individual comparisons with past, future, or deserved self. These comparisons can create outcomes on the interpersonal

level, that is, effects on *internal states*, and *individual behavior*. Belonging to the second type are *intergroup comparisons*, where individuals compare their ingroup with some outgroup, or compare their ingroup's current state with its past, future, or deserved state. These comparisons can create outcomes on the intergroup level, that is, effects on *intergroup attitudes*, and *collective action*. These comparisons are part of what is being referred to as *group relative deprivation*. Lastly, the third type accounts for *interpersonal comparisons with outgroup members*. These comparisons can create outcomes both at the interpersonal level, and at the intergroup level. The comparison level needs to fit the outcome level, such that outcomes at the interpersonal level link to personal relative deprivation and intergroup outcomes link to group relative deprivation. The authors argue that in other research the distinction between outcome levels is often ignored, which has lead to, for example, attempts at the prediction of collective behavior through comparisons at the interpersonal level.

In summary, Smith et al. (2012) describe the essential relative deprivation argument as follows: “people’s reactions to their circumstance depend on the comparisons they do or do not make” (p. 206). Individuals may choose to compare themselves to others who are worse (downward comparison) or better off (upward comparison) than themselves. They may also compare themselves with their own past self, future self, or deserved selves. Although tax compliance can be partly explained through *collective* attitudes, e.g. norms, which “become cultural standards, often mirrored in the actual law” (Kirchler et al., 2008, p. 218), the outcome this thesis aims to investigate is *individual* tax compliance. As this outcome falls into the *interpersonal outcome* type in the Smith et al. (2012) model (see figure 1), this study conforms to the authors’ advice and investigates *interpersonal* comparisons as predictors of tax compliance, as opposed to *intergroup* comparisons. The construct utilized in this research, therefore, is personal relative deprivation – referred to by Smith et al. (2012) as *individual* relative deprivation.

1.4.2 Outcomes and Consequences

In previous studies, personal relative deprivation has been linked to a host of negative outcomes, such as moral disengagement (Zhao & Zhang, 2022), materialism (Kim et al., 2017), decisions to gamble (Callan et al., 2008), problem gambling tendencies (Mishra & Meadows, 2018), and aggressiveness (Greitemeyer & Sagioglou, 2016). Other studies have found personal relative deprivation to be negatively correlated with quality of life (Qin et al., 2022), physical and mental health (Mishra & Carleton, 2015), and belief in a just world (Chen et al., 2022; Jung & Garrison, 2022; Tripathi et al., 2022; S. Wickham et al., 2014).

1.5 Integration

Christandl (2013) presents results from two longitudinal studies, which suggest that personal belief in a just world reduced the perceived impact of real-life adverse economic events

(a VAT increase and the global financial crisis). The author points out that, although individuals face these kind of events on a regular basis – such as rising tax or insurance rates – individual differences are evident in the way they perceive themselves to be affected by them. Following this reasoning, a central argument of this thesis is that the payment of taxes could be interpreted by individuals as an adverse financial event, and might be perceived as less impactful by individuals with high adherence to a belief in a just world. Additionally, in order to maintain their belief in a just world, taxation as such might be perceived as justified, and narratives of taxation being unjust might be rejected, because these could threaten their belief in a just world.

However, in their recent study investigating the influence of belief in a just world and other related factors (competitive worldview, system justification, prevalence and risk of punishment) on attitudes towards dishonesty in the form of tax evasion, Ulybina and Gavrilova (2024) found no significant effect of belief in a just world on tax evasion. This finding was consistent across individuals with and without taxpaying experience as entrepreneurs; and across small and large businesses. Incidentally, their study was not yet published at the time of the conception of this thesis and no additional studies investigating a link between tax compliance and belief in a just world were found in the literature research; neither were any studies found regarding a potential relationship between tax compliance and personal relative deprivation. This thesis therefore aims to be one of the first to shed some light onto possible links between tax compliance and these two constructs.

1.6 Model Assumptions

The subject of how the relationship between belief in a just world and personal relative deprivation is best described (i.e. as a mediation, moderation, or neither) has not been treated uniformly in previous publications. Several studies have investigated associations between personal relative deprivation and belief in a just world as predictors of other outcomes, with belief in a just world mediating an effect of personal relative deprivation (Chen et al., 2022; S. Wickham et al., 2014; Yu et al., 2020), personal relative deprivation mediating an effect of belief in a just world (Pan & Zhao, 2023; Yu et al., 2020), belief in a just world moderating an effect of personal relative deprivation (Xiong et al., 2022; Xiong & Hu, 2022; Xiong & Zou, 2022), or including neither moderation nor mediation models (Jung & Garrison, 2022; Tripathi et al., 2022).

A central assumption of this thesis is that belief in a just world acts on the second step (*cognitive appraisals*) and maybe also on the third step (*justice-related affect*) in the summary model of relative deprivation described by Smith et al. (2012) – see figure 1. Some empirical support for belief in a just world acting on the cognitive appraisal step when confronted with adverse economic events is given by Christandl (2013), who found that strong personal belief in a just world predicted a lower perceived economic impact of price

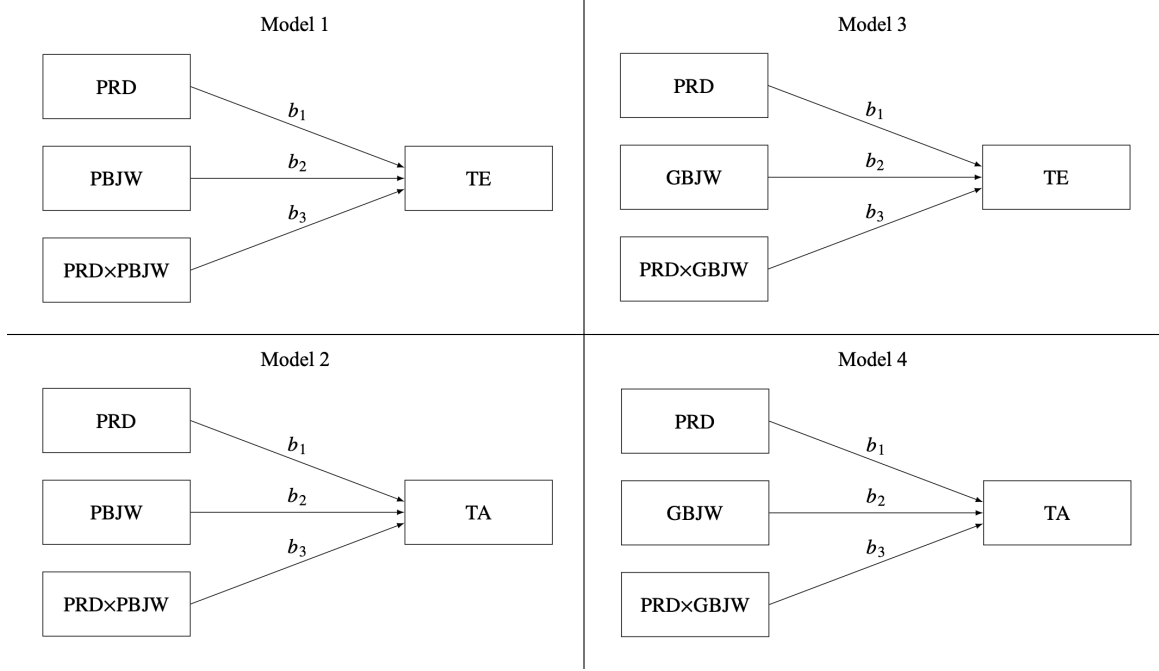
increases due to an increase in VAT. In the same study, similar results were found for perceptions of the 2007–2008 financial crisis: its impact was perceived as lower in individuals with a strong personal belief in a just world. Both of these effects remained significant after controlling for participants' sociodemographic attributes. This could indicate that the belief in a just world (or rather, lack thereof) possibly plays a role in mediating the emergence of relative deprivation in an individual: if they are strongly motivated to belief in a fair world, they will perhaps have the propensity to appraise disadvantaged economic situations as less impactful. The study by Christandl (2013) highlights an important question regarding the explanatory power of purely objective or macro-level predictors of subjective affectedness:

it is possible that socioeconomic variables such as income or education are insufficient to predict why some people, but not others, are affected by adverse economic events. If the belief in a just world contributes to lower levels of subjective affectedness, then it is possible that economic theory systematically misjudges the proportion of people who remain calm during adverse economic events. This pattern could explain why, on the whole, the general public's reaction to such events may not be as severe as economists expect (p. 487)

If the finding that belief in a just world leads to less perceived impact of specific adverse economic events can be generalized, and if the payment of income tax can be perceived by taxpayers as falling into that category, it can be assumed that individuals with a strong belief in a just world might be inclined to perceive the impact of taxes on their economic situation as less severe.

In the relative deprivation model, step three describes the justice-related affect, which is necessary for outcomes on the interpersonal level to occur. The individual engaging in a disadvantaged comparison must appraise the disparities as unfair, which leads to an internal affective state of angry resentment, which in turn motivates individual behavior. Following the assumption that belief in a just world acts on the cognitive appraisals step – which is a precondition to the *justice-related affect step* – and thereby possibly generates boundary conditions for the influence of personal relative deprivation on tax compliance, this thesis proposes four simple moderation models (see figure 2): personal relative deprivation predicting tax evasion, moderated by personal belief in a just world (model 1), personal relative deprivation predicting tax avoidance, moderated by personal belief in a just world (model 2), personal relative deprivation predicting tax evasion, moderated by general belief in a just world (model 3), and personal relative deprivation predicting tax avoidance, moderated by general belief in a just world (model 4). In all four moderations, the effect of personal relative deprivation on tax evasion or tax avoidance is assumed to be greater in individuals with a weak personal belief in a just world or general belief in a just world.

Figure 2: Moderation Models



Note. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), and tax evasion (TE).

1.7 Hypotheses

Following the assumptions of a simple moderation model and considering all relevant combinations of personal relative deprivation with personal belief in a just world, general belief in a just world, tax avoidance and tax evasion, the following hypotheses were formulated:

- H1: Personal relative deprivation correlates positively with tax evasion.
- H2: Personal belief in a just world correlates negatively with tax evasion.
- H3: The effect of personal relative deprivation on tax evasion is moderated by personal belief in a just world, decreasing the effect of personal relative deprivation on tax evasion with higher personal belief in a just world.
- H4: Personal relative deprivation correlates positively with tax avoidance.
- H5: Personal belief in a just world correlates negatively with tax avoidance.
- H6: The effect of personal relative deprivation on tax avoidance is moderated by personal belief in a just world, decreasing the effect of personal relative deprivation on tax avoidance with higher personal belief in a just world.
- H7: General belief in a just world correlates negatively with tax evasion.

- H8: The effect of personal relative deprivation on tax evasion is moderated by general belief in a just world, decreasing the effect of personal relative deprivation on tax evasion with higher general belief in a just world.
- H9: General belief in a just world correlates negatively with tax avoidance.
- H10: The effect of personal relative deprivation on tax avoidance is moderated by general belief in a just world, decreasing the effect of personal relative deprivation on tax avoidance with higher general belief in a just world.

Hypotheses 1, 2, 4, 5, 7, and 9 describe the basic relationship between those constructs operationalizing the justice motive (personal belief in a just world, general belief in a just world, and personal relative deprivation) and those operationalizing tax noncompliance (tax evasion and tax avoidance), whereas hypotheses 3, 6, 8, and 10 describe the proposed moderation models.

2 Methods

2.1 Description of the Sample

In order to access as large a population as possible, the survey was conducted in English and German. Survey language versions were similar in sample size: 50.7% ($n = 172$) participated in the English survey, and 49.3% ($n = 167$) in the German survey. The sample was multinational and consisted of 339 participants. Recruiting was done mostly via social media, and most participants were either recruited via Reddit (51.9%, $n = 176$) or professional associations and networks (28.9%, $n = 98$), see table 1. More than half of the participants stated their country of residence as either Germany, Austria, or United States, see table 2. Overall, 53.1% ($n = 180$) identified as female, and 43.7% identified as male, see table 3. Participants were born between 1946 and 2004, see table 4. Most participants

Table 1: Respondent Source Summary

Source	n	Percentage
Reddit	176	51.90
Professional associations and networks	98	28.90
Other	34	10.00
Word of mouth	24	7.10
Not answered	4	1.20
SurveyCircle	3	0.90

reported a university degree as highest level of education (79.6%, $n = 270$), see table 5. Professional qualifications and personal income level were assessed and are summarized in tables 6 and 7.

Table 2: Countries of Residence Summary

Country of residence	n	Percentage
Germany	114	33.60
Austria	44	13.00
United States	22	6.50
Not answered	18	5.30
Pakistan	11	3.20
Russia	8	2.40
United Kingdom, Uruguay	7	2.10
Bosnia and Herzegovina	6	1.80
Turkey, Nigeria, Switzerland, South Africa	5	1.50
Barbados, Australia, Japan, Spain, Kosovo, Cyprus, Portugal	4	1.20
Poland, Montenegro, Bulgaria, Indonesia, Denmark, Slovenia	3	0.90
Vietnam, Kazakhstan, Czech Republic, Italia, Philip-pines, Jamaica, Burma, Romania	2	0.60
China (People's Republic of China), Finland, Qatar, Saudi Arabia, Serbia, Jordan, Fiji, France, Kuwait, Laos, Canada, Peru, New Zealand, Colombia, Ukraine, Trinidad and Tobago, Israel, Georgia, Cuba, Chile	1	0.30

Note. Countries with equal number of respondents were grouped together in this table.

Table 3: Gender Summary

Gender	<i>n</i>	Percentage
Female	180	53.10
Male	148	43.70
Prefer not to say	7	2.10
Non-binary	3	0.90
Transgender man / transmasculine	1	0.30

Table 4: Birth Year Summary

Statistic	Birth year
Mean birth year	1981.1
Median birth year	1982
Min birth year	1946
Max birth year	2004

Table 5: Highest Formal Education Summary

Highest level of education	<i>n</i>	Percentage
University degree	270	79.60
Vocational secondary certification (completion of specialized secondary school / college)	19	5.60
Secondary school-leaving certificate / Junior High Diploma	13	3.80
A-levels / International Baccalaureate, subject-related higher education entrance qualification	12	3.50
General Certificate of Secondary Education (GCSEs)	11	3.20
Finished school with no qualifications	7	2.10
Still in school	5	1.50
Other	2	0.60

Table 6: Professional Qualifications Summary

Professional qualification	<i>n</i>	Percentage
No professional qualifications	15	4.40
Vocational training with diploma	35	10.30
Compact vocational training	14	4.10
Industrial or agricultural apprenticeship	15	4.40
Commercial traineeship	41	12.10
Internship or practical training	39	11.50
Specialized vocational qualification	54	15.90
General vocational qualification	24	7.10
Master / technical certification	33	9.70
Vocational university / university of applied sciences degree	29	8.60
University degree	251	74.00
Other degree	19	5.60

Note. Multiple professional qualifications could be chosen.

Table 7: Income Level Summary

Income	<i>n</i>	Percentage
I do not have a personal income	3	0.90
less than 250 \$	7	2.10
250 \$ up to 500 \$	10	2.90
500 \$ up to 1000 \$	33	9.70
1000 \$ up to 1500 \$	33	9.70
1500 \$ up to 2000 \$	31	9.10
2000 \$ up to 2500 \$	41	12.10
2500 \$ up to 3000 \$	27	8.00
3000 \$ up to 3500 \$	25	7.40
3500 \$ up to 4000 \$	17	5.00
4000 \$ or more	69	20.40
Not answered	43	12.70

Note. In the German survey version, a euro sign was used instead of a dollar sign to denote currency.

2.2 Measures

The tax compliance inventory (TAX-I; Kirchler & Wahl, 2010) was used, which consists of four constructs, two of which operationalize tax non-compliance: tax avoidance, describing intentional reduction of taxes through legal means, and tax evasion, describing the use of illegal means of reducing taxes. The other two constructs measured by the TAX-I are voluntary tax compliance and enforced tax compliance, which describe the tendency of an individual to either be willing to engage in tax compliant behavior voluntarily or rather through enforcement (see Kirchler et al., 2008). General belief in a just world was measured with the general belief in a just world scale (Dalbert et al., 2002; Dalbert et al., 1987) while for personal belief in a just world the personal belief in a just world scale (Dalbert, 2002; Dalbert, 1999) was used. Personal relative deprivation was measured with the revised personal relative deprivation scale (Callan et al., 2011). Institutional trust was included as an exploratory variable and operationalized with a single item (“I trust the tax authority in my country”). Coefficient alpha was calculated for all construct measures and ranged between .73 and .91, which was deemed acceptable (see table 8). The following demographic variables were measured: professional qualifications, highest level of education, monthly income, country of residence, gender identity, and year of birth. Furthermore, two control items for distractedness and diligence were included, and one item for recruitment source.

2.2.1 Translation of Measures

The TAX-I (Kirchler & Wahl, 2010), general belief in a just world scale (Dalbert et al., 2002; Dalbert et al., 1987), and personal belief in a just world scale (Dalbert, 2002; Dalbert, 1999) have all been made available in both English and German by the respective authors, whereas the revised personal relative deprivation scale (Callan et al., 2011) was translated into German by me for this investigation.

2.3 Power Analysis

An a priori power analysis was conducted in G*Power (version 3.1.9.6; Faul et al., 2009) in order to determine the appropriate sample size, which resulted in a sample of $N \geq 311$ required to obtain a power of .8, based on the assumptions of an estimated interaction effect size of .02 and directional testing.

2.4 Data Collection

For the purposes of this study, the target population needed to be comprised of partly or fully self-employed individuals, as they have greater control over their compliance behavior, compared to individuals who are not self-employed. A self-selected convenience sample was obtained through Reddit (51.9%, $n = 176$), professional associations and networks

(28.9%, $n = 98$), word of mouth (7.1%, $n = 24$), SurveyCircle (0.9%, $n = 3$), and 11.2% ($n = 38$) reported either other sources or did not specify. Recruitment source distribution is summarized in table 1. Individuals who visited the survey website were informed that their participation in the study was voluntary, that they could cancel at any time and that their answers would be kept anonymous and confidential. The survey was conducted via SoSci Survey (version 3.4.17; Leiner, 2023) from April to September 2023.

2.5 Statistical Software Packages

R (version 4.3.1; R Core Team, 2023) was used for data preprocessing, statistical analysis, and the creation of tables and figures. Correlations were estimated using the *stats* package (R Core Team, 2023), and moderation analyses were conducted using *PROCESS macro* (version 4.3.1; Hayes, 2017). In addition to that, the following packages were used: *apaTables* (version 2.0.8; Stanley, 2021), *car* (version 3.1-2; Fox & Weisberg, 2019), *conflicted* (version 1.2.0; H. Wickham, 2023), *devtools* (version 2.4.5; H. Wickham et al., 2022), *dplyr* (version 1.1.3; H. Wickham et al., 2023), *ggplot2* (version 3.4.3; H. Wickham, 2016), *Hmisc* (version 5.1-1; Harrell Jr, 2023), *jtools* (version 2.2.2; Long, 2022), *kableExtra* (version 1.3.4; Zhu, 2021), *knitr* (version 1.44; Xie, 2023), *ltm* (version 1.2-0; Rizopoulos, 2006), *MOTE* (version 1.0.2; Buchanan et al., 2019), *openxlsx* (version 4.2.5.2; Schauburger & Walker, 2023), *pacman* (version 0.5.1; Rinker & Kurkiewicz, 2018), *papaja* (version 0.1.1; Aust & Barth, 2022), *pastecs* (version 1.3.21; Grosjean & Ibanez, 2018), *polycor* (version 0.8-1; Fox, 2022), *psych* (version 2.3.6; Revelle, 2023), *rmarkdown* (version 2.25; Allaire et al., 2023), *simsem* (version 0.5-16; Pornprasertmanit et al., 2021), *stargazer* (version 5.2.3; Hlavac, 2022), *stdmod* (version 0.2.9; Cheung et al., 2022), *tidyverse* (version 2.0.0; H. Wickham et al., 2019), and *xtable* (version 1.8.4; Dahl et al., 2019). Generative AI (OpenAI, 2022) was used in the creation of *R* syntax, mainly for the automatic compilation of results and the construction of plots and tables.

2.6 Data Preprocessing

2.6.1 Exclusion Criteria

Participants were only able to take part in the survey if they stated that they were either fully or partly self-employed. Entries were excluded from the dataset if the survey was not exited at the last page, or if the participant's stated birthdate was greater than 2004. One item for meaningless responses was included, which asked participants whether they carried out all tasks according to instructions, which lead to exclusion if participants reported that they "sometimes clicked something because I was unmotivated or simply did not know" or "often clicked something, so I am quickly done". In addition to that, one item asked participants whether they were able to complete the survey without being distracted, which

lead to exclusion if participants reported that they were “distracted by my environment (people, noises, etc.) several times”, but not if they reported that they were distracted only once. Furthermore, two measures for being too fast, which were provided by SoSci Survey, were used to exclude additional entries. Lastly, two entries were excluded because of implausible birthdates. After exclusion of entries, the final sample size consisted of 339 participants.

2.6.2 Imputation of Data

The final dataset had almost no missing entries, since most items were mandatory and therefore could not be skipped by participants. There were two exceptions: a single entry for institutional trust, which was not mandatory and was skipped by one participant. In this case, the missing data was imputed with the median value. The second imputation was made for a participant who, after completing the questionnaire, provided the information that they stated their income incorrectly by mistake. In this case, their correct income bracket was not obtainable from the participant without putting them in an inconvenient position, therefore their stated income range was replaced with “not answered”.

2.6.3 Centering of Predictors

Due to their non-interpretability at the value zero, the predictors personal relative deprivation, personal belief in a just world, general belief in a just world, institutional trust, voluntary tax compliance, and enforced tax compliance were mean-centered prior to regression analysis. Any regression coefficient of a given predictor therefore is to be interpreted as change in the outcome at one unit difference of the predictor, at the mean value of all other predictors in the same model. Furthermore, the constant can be interpreted as the value of the outcome when all model predictors are at their mean value (see Field et al., 2012; Hayes, 2017). In the exploratory data analysis, where the English and German subsamples were examined separately, mean-centering happened after filtering for language version.

3 Results

3.1 Intercorrelations

Intercorrelations, means, standard deviations and alpha values for all main constructs used in this study are reported in table 8. For more detailed intercorrelation statistics including CIs and p values see table 21 in the appendix. See also the scatterplot matrix in figure 10 for a visual representation of intercorrelations.

Table 8: Descriptive Statistics and Correlations for Study Variables (Full Sample)

Measure	<i>M</i>	<i>SD</i>	α	1	2	3	4	5	6	7
1. PRD	13.25	5.14	.79	—						
2. GBJW	15.29	5.5	.79	-.09	—					
3. PBJW	27.25	7.24	.91	-.38***	.42***	—				
4. TA	19.82	7.19	.73	.05	.22***	-.02	—			
5. TE	15.74	8.32	.86	.22***	.09	.01	.40***	—		
6. VTC	24.91	8.53	.91	-.16**	.05	.19***	-.19***	-.37***	—	
7. ETC	14.67	8.29	.88	.17**	.27***	.04	.38***	.40***	-.35***	—
8. IT	3.35	1.67	—	-.22***	.05	.33***	-.28***	-.32***	.54***	-.32***

Note. $N = 339$. M , SD , and α represent mean (before centering), standard deviation, and coefficient alpha, respectively. * $p < .05$; ** $p < .01$; *** $p < .001$. Significance test results reported in this table are non-directional. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), tax evasion (TE), voluntary tax compliance (VTC), enforced tax compliance (ETC), and institutional trust (IT).

3.2 Internal Consistency

For each construct, coefficient alpha was calculated for the overall sample and for each language version separately. Coefficient alpha values were similar across language versions, they ranged between .68 and .93 and are reported in table 9.

Table 9: Survey Versions Internal Consistency

Construct	α (overall)	α (German)	α (English)
PRD	.79	.83	.74
GBJW	.79	.81	.75
PBJW	.91	.93	.88
TA	.73	.70	.68
TE	.86	.85	.84
VTC	.91	.91	.90
ETC	.88	.89	.85
IT	—	—	—

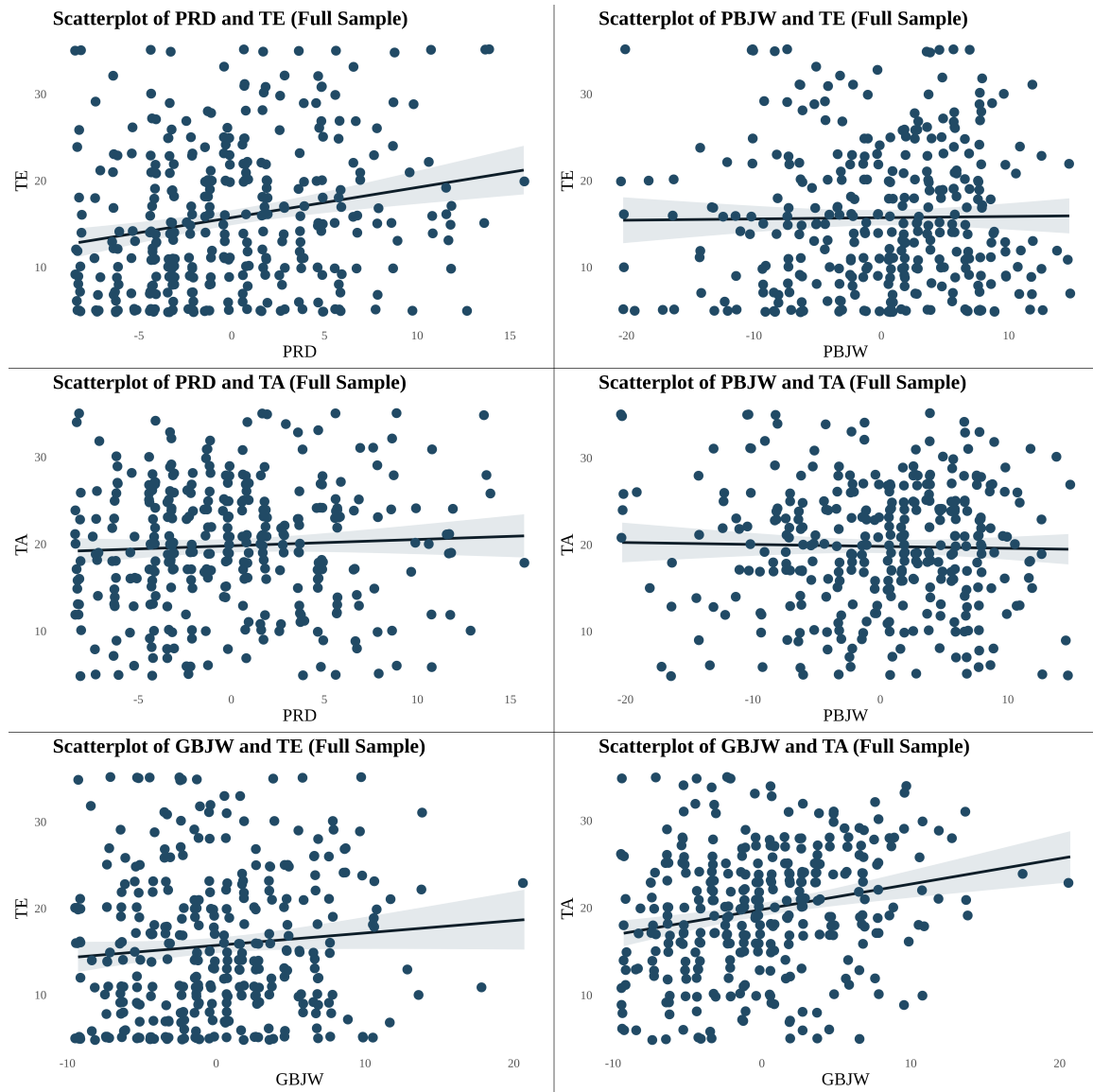
Note. IT was a single item and therefore not coefficient alpha could be calculated. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), tax evasion (TE), voluntary tax compliance (VTC), enforced tax compliance (ETC), and institutional trust (IT).

3.3 Correlation Hypotheses

All correlation hypotheses were tested directionally by calculating Pearson’s product-moment correlation (r) with 95% confidence intervals (CI) using the stats package in R. Scatterplots were constructed for all six correlation hypotheses – see figure 3. The results *before* correcting for the family-wise error rate are as follows:

Hypothesis one (personal relative deprivation correlates positively with tax evasion) was significant ($r = .215$, $CI = [.128, 1]$, $p < .001$); hypothesis two (personal belief in a just world correlates negatively with tax evasion) was not significant ($r = .013$, $CI = [-1, .102]$, $p = .591$); hypothesis four (personal relative deprivation correlates positively with tax avoidance) was not significant ($r = .052$, $CI = [-.038, 1]$, $p = .172$); hypothesis five (personal belief in a just world correlates negatively with tax avoidance) was not significant ($r = -.022$, $CI = [-1, .067]$, $p = .340$); hypothesis seven (general belief in a just world correlates negatively with tax evasion) was not significant ($r = .095$, $CI = [-1, .183]$, $p = .960$); hypothesis nine (general belief in a just world correlates negatively with tax avoidance) was not significant ($r = .223$, $CI = [-1, .307]$, $p > .999$).

Figure 3: Scatterplots for all Correlation Hypotheses (Full Sample)



Note. Regression lines with CIs were included in the scatterplots, which were constructed with point jitter for better visibility. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), and tax evasion (TE).

3.4 Multicollinearity

Variance inflation factors (VIF) were calculated for all predictors of the four moderation models and ranged between 1.011 and 1.215, which was deemed acceptable (see Bortz & Schuster, 2010; Field, 2009). Furthermore, VIFs were calculated separately for two models with tax avoidance and tax evasion as outcomes and personal relative deprivation, general belief in a just world, personal belief in a just world, voluntary tax compliance, enforced tax compliance, institutional trust, gender, and survey language version as predictors. These

models were used as starting points for the stepwise construction of exploratory models and their VIFs ranged between 1.238 and 1.815, which was deemed acceptable as well.

3.5 Outlier Analysis

Prior to the moderation analyses, four linear regressions were calculated (see tables 10, 11, 12, and 13). Across these regressions, the percentage of cases with standardized residuals greater than two ranged between 3.24% and 5.01%, and the percentage of cases with standardized residuals greater than 2.5 ranged between 0% and 1.47%. The percentages of outliers were deemed acceptable (see Field et al., 2012) across all four regressions and therefore no cases were excluded.

Table 10: Regression for Model 1

Predictor	<i>b</i>	95% CI	<i>t</i>	<i>df</i>	<i>p</i>
Intercept	15.86	[14.94, 16.78]	33.97	335	< .001
PRD	0.43	[0.25, 0.62]	4.57	335	< .001
PBJW	0.13	[0.00, 0.26]	1.95	335	.053
PRD × PBJW	0.01	[−0.01, 0.03]	0.79	335	.430

Note. Regression predicting tax evasion (TE) through personal relative deprivation (PRD), personal belief in a just world (PBJW), and their interaction. CIs and *p* values in this table result from non-directional testing.

Table 11: Regression for Model 2

Predictor	<i>b</i>	95% CI	<i>t</i>	<i>df</i>	<i>p</i>
Intercept	19.75	[18.93, 20.57]	47.54	335	< .001
PRD	0.06	[−0.10, 0.23]	0.75	335	.455
PBJW	0.00	[−0.12, 0.11]	−0.05	335	.956
PRD × PBJW	0.00	[−0.02, 0.01]	−0.48	335	.633

Note. Regression predicting tax avoidance (TA) through personal relative deprivation (PRD), personal belief in a just world (PBJW), and their interaction. CIs and *p* values in this table result from non-directional testing.

Table 12: Regression for Model 3

Predictor	<i>b</i>	95% CI	<i>t</i>	<i>df</i>	<i>p</i>
Intercept	15.67	[14.81, 16.54]	35.56	335	< .001
PRD	0.35	[0.18, 0.52]	4.01	335	< .001
GBJW	0.17	[0.01, 0.33]	2.13	335	.034
PRD × GBJW	−0.02	[−0.06, 0.01]	−1.43	335	.153

Note. Regression predicting tax evasion (TE) through personal relative deprivation (PRD), general belief in a just world (GBJW), and their interaction. CIs and *p* values in this table result from non-directional testing.

Table 13: Regression for Model 4

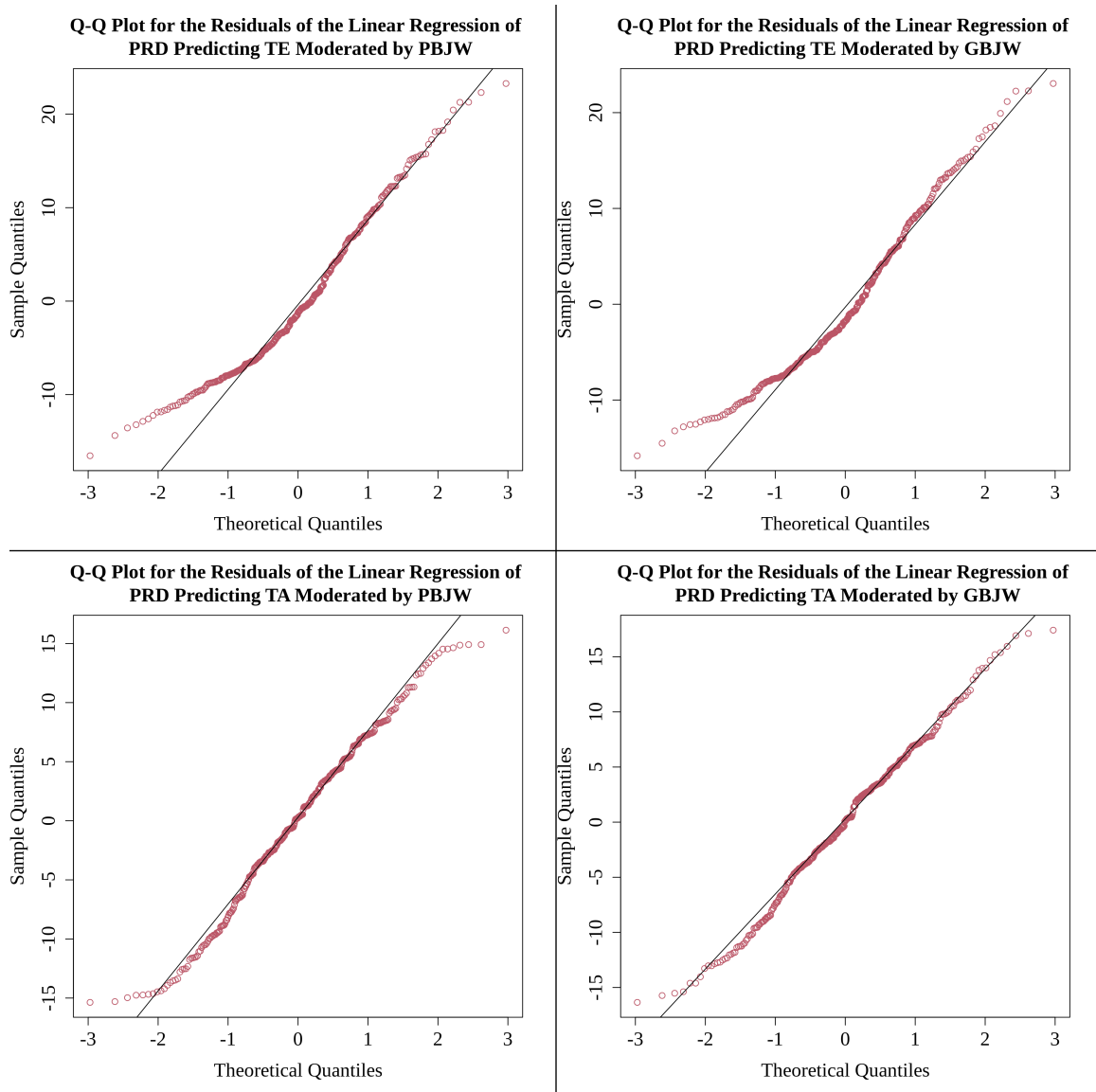
Predictor	<i>b</i>	95% CI	<i>t</i>	<i>df</i>	<i>p</i>
Intercept	19.74	[18.99, 20.49]	51.80	335	< .001
PRD	0.08	[−0.07, 0.23]	1.09	335	.278
GBJW	0.30	[0.16, 0.43]	4.26	335	< .001
PRD × GBJW	−0.03	[−0.06, 0.00]	−1.89	335	.060

Note. Regression predicting TA through personal relative deprivation (PRD), general belief in a just world (GBJW), and their interaction. CIs and *p* values in this table result from non-directional testing.

3.6 Normality

Shapiro-Wilk tests were conducted for normality of residuals of the four moderation models, and were significant for model 1 ($W = .961$, $p < .001$), model 2 ($W = .987$, $p = .005$), and model 3 ($W = .962$, $p < .001$), but not for model 4 ($W = .993$, $p = .120$). Because of the large sample size, significant results were to be expected (see Field, 2009), limiting their interpretability. Therefore, Q-Q plots were created, which were visually interpreted and deemed acceptable (see figure 4).

Figure 4: Q-Q Plots for all Moderation Regressions (Full Sample)



Note. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), and tax evasion (TE).

3.7 Moderation

For visual reference, moderation plots for the full sample can be found in figure 5. Tumble graphs were used for all moderation plots, following the recommendations and using the method of Bodner (2016) in order to avoid the risk of graph end-points residing in areas with scarce or no data. All moderation hypotheses were tested using PROCESS macro (Hayes, 2017) in R (R Core Team, 2023). As PROCESS macro allows for non-directional testing only, the resulting p values and CIs needed to be converted into their directional

equivalents, in order to account for the directionality of the hypotheses. Directional p values were calculated for each test as follows:

$$p_{\text{directional}} = \frac{p_{\text{non-directional}}}{2}$$

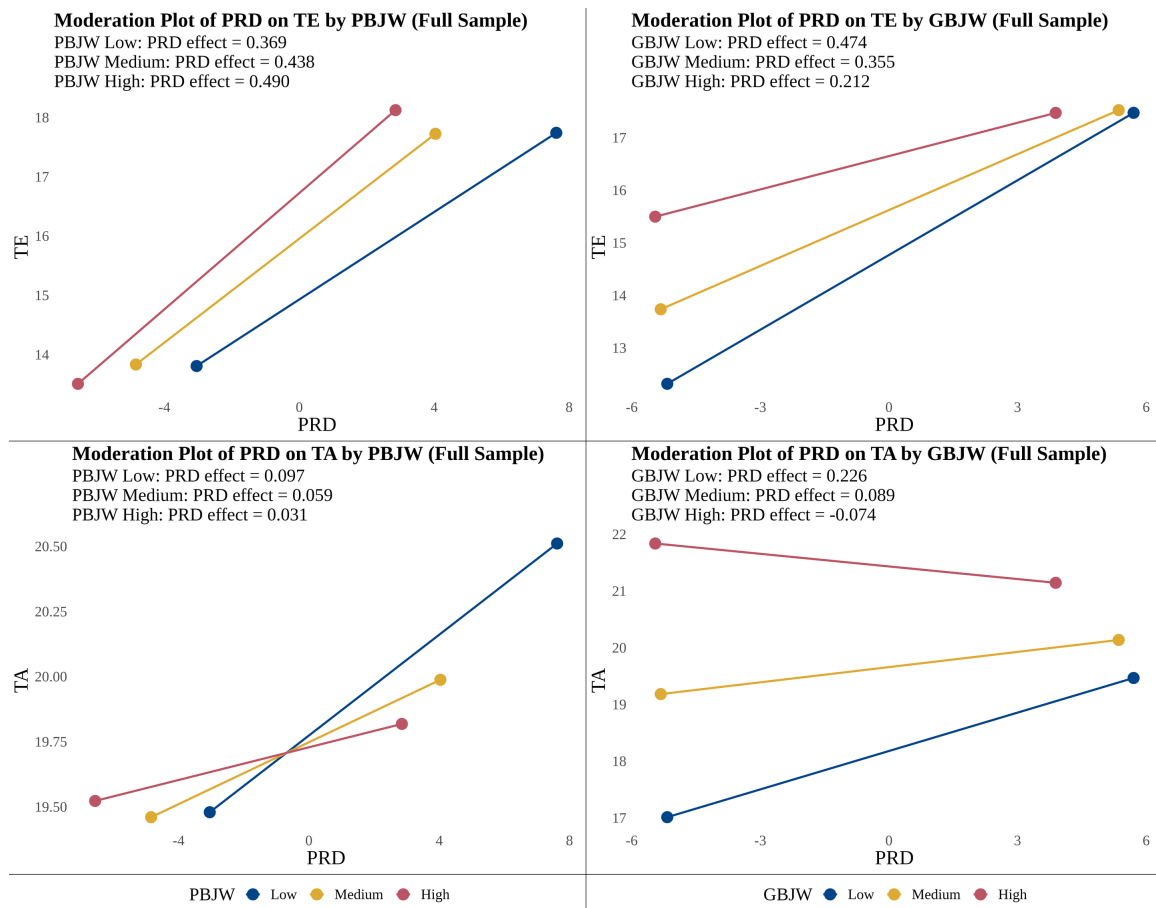
if the observed direction of the effect fit the hypothesis, and

$$p_{\text{directional}} = 1 - \frac{p_{\text{non-directional}}}{2}$$

if the observed direction of the effect did *not* fit the hypothesis.

Directional (one-tailed) 95% CIs were constructed by setting the CI parameter in PROCESS macro to a 90% CI and then replacing the non-tail end of the CI by $-\infty$. The following reported p values and CIs are all directional. Contrary to hypothesis three, the interaction effect of personal relative deprivation and personal belief in a just world as predictors of tax evasion was not significant ($b = 0.009$, $SE = 0.011$, $CI = [-\infty, 0.027]$, $p = .785$).

Figure 5: Moderation Plots (Full Sample)



Note. Moderator levels: low = 16th percentile; medium = 50th percentile; high = 84th percentile. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), and tax evasion (TE).

Likewise, hypothesis six could not be substantiated, since the interaction effect of personal relative deprivation and personal belief in a just world as predictors of tax avoidance was not significant ($b = -0.005$, $SE = 0.010$, $CI = [-\infty, 0.011]$, $p = .316$). Neither could hypothesis eight be confirmed, since the interaction effect of personal relative deprivation and general belief in a just world as predictors of tax evasion was not significant ($b = -0.024$, $SE = 0.017$, $CI = [-\infty, 0.004]$, $p = .077$). The interaction effect of personal relative deprivation and general belief in a just world as predictors of tax avoidance, however, was significant after accounting for directionality, which was in support of hypothesis ten ($b = -0.027$, $SE = 0.014$, $CI = [-\infty, -0.004]$, $p = .030$).

3.8 Family-Wise Error Rate

In order to counteract the family-wise error rate, all hypothesis test results were corrected with the Holm-Bonferroni method, which (for m tests) sorts all p values by size – from p_1 (being the smallest) to p_m (being the greatest) – and then tests for each p value (p_k) whether it exceeds a corrected α :

$$p_k < \frac{\alpha}{m + 1 - k}$$

After correcting for the family-wise error rate, only hypothesis one (personal relative deprivation correlates positively with tax evasion) remained significant ($p < .001$).

3.9 Exploration

3.9.1 Survey Version Comparison

Survey language version differences of group means were calculated and are reported in table 14. Almost all construct means were significantly different across language groups. There was no difference between groups in personal relative deprivation ($M_{Ger} = 13.02$, $SD_{Ger} = 5.3$, $M_{Eng} = 13.48$, $SD_{Eng} = 4.98$, $T = -0.81$, $p = .42$). General belief in a just world was greater in the English sample ($M_{Ger} = 13.77$, $SD_{Ger} = 5.02$, $M_{Eng} = 16.76$, $SD_{Eng} = 5.56$, $T = -5.21$, $p < .001$). Personal belief in a just world was greater in the German sample ($M_{Ger} = 28.17$, $SD_{Ger} = 7.37$, $M_{Eng} = 26.37$, $SD_{Eng} = 7.02$, $T = 2.3$, $p = .02$). Tax avoidance was greater in the English sample ($M_{Ger} = 17.13$, $SD_{Ger} = 6.82$, $M_{Eng} = 22.42$, $SD_{Eng} = 6.57$, $T = -7.27$, $p < .001$). Tax evasion was greater in the English sample ($M_{Ger} = 13.19$, $SD_{Ger} = 7.18$, $M_{Eng} = 18.22$, $SD_{Eng} = 8.61$, $T = -5.85$, $p < .001$). Voluntary tax compliance was greater in the German sample ($M_{Ger} = 26.86$, $SD_{Ger} = 7.8$, $M_{Eng} = 23.01$, $SD_{Eng} = 8.79$, $T = 4.27$, $p < .001$). Enforced tax compliance was greater in the English sample ($M_{Ger} = 11.89$, $SD_{Ger} = 7.45$, $M_{Eng} = 17.36$, $SD_{Eng} = 8.19$, $T = -6.43$, $p < .001$). Institutional trust was greater in the German sample ($M_{Ger} = 4.08$, $SD_{Ger} = 1.34$, $M_{Eng} = 2.65$, $SD_{Eng} = 1.67$, $T = 8.74$, $p < .001$).

Table 14: Comparison of Means for Survey Versions

Construct	M (overall)	SD (overall)	M (German)	SD (German)	M (English)	SD (English)	T	df
PRD	13.25	5.14	13.02	5.30	13.48	4.98	-0.81	334.18
GBJW	15.29	5.50	13.77	5.02	16.76	5.56	-5.21 ***	335.26
PBJW	27.25	7.24	28.17	7.37	26.37	7.02	2.3 *	334.91
TA	19.82	7.19	17.13	6.82	22.42	6.57	-7.27 ***	335.48
TE	15.74	8.32	13.19	7.18	18.22	8.61	-5.85 ***	329.61
VTC	24.91	8.53	26.86	7.80	23.01	8.79	4.27 ***	334.33
ETC	14.67	8.29	11.89	7.45	17.36	8.19	-6.43 ***	335.59
IT	3.35	1.67	4.08	1.34	2.65	1.67	8.74 ***	325.31

Note. Welch's t -test was performed for all comparisons. M , SD , T , and df represent mean (before centering), standard deviation, T -statistic, and degrees of freedom, respectively. * $p < .05$; ** $p < .01$; *** $p < .001$. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), tax evasion (TE), voluntary tax compliance (VTC), enforced tax compliance (ETC), and institutional trust (IT).

Levene's test was conducted with median centering for assessing heterogeneity of variances across survey versions, the results of which are reported in table 15. Differences in variance across survey versions were found for tax evasion ($F = 6.98, p = .009$), voluntary tax compliance ($F = 6.05, p = .014$), and enforced tax compliance ($F = 4.73, p = .03$), institutional trust ($F = 15.43, p < .001$), but not for either personal relative deprivation ($F = 1.29, p = .256$), general belief in a just world ($F = 2.97, p = .086$), personal belief in a just world ($F = 0.04, p = .84$), or tax avoidance ($F = 1.37, p = .242$).

In order to account for the differences in construct means and variances across language version subsamples, an additional exploratory data analysis was conducted for the two subsamples individually, the results of which are reported here. Descriptives and construct intercorrelations for the German and English subsamples can be found in tables 16 and 17, as well as their respective scatterplot matrices in figures 11 and 12. Furthermore, all hypotheses were tested again for each subsample, the results of which are reported in the following sections.

Table 15: Comparison of Variances for Survey Versions

Construct	Test type	df	F	p
PRD	Median	1	1.29	.256
GBJW	Median	1	2.97	.086
PBJW	Median	1	0.04	.840
TA	Median	1	1.37	.242
TE	Median	1	6.98	.009
VTC	Median	1	6.05	.014
ETC	Median	1	4.73	.030
IT	Median	1	15.43	< .001

Note. Levene's test for heterogeneity of variances was conducted for the survey language version subsamples. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), tax evasion (TE), voluntary tax compliance (VTC), enforced tax compliance (ETC), and institutional trust (IT).

3.9.2 German Sample

Descriptive intercorrelations were constructed non-directionally and can be found in table 16. For more detailed intercorrelation statistics including CIs and p values see table 22 in the appendix. See also the scatterplot matrix (figure 11) in the appendix for a visual representation.

Compared to the overall sample, results regarding the correlation hypotheses were very similar in the German sample: Hypothesis one (personal relative deprivation correlates positively with tax evasion) would have been significant ($r = .222$, $CI = [.097, 1]$, $p = .002$); hypothesis two (personal belief in a just world correlates negatively with tax evasion) would not have been significant ($r = .091$, $CI = [-1, .216]$, $p = .878$); hypothesis four (personal relative deprivation correlates positively with tax avoidance) would not have been significant ($r = -.003$, $CI = [-.131, 1]$, $p = .516$); hypothesis five (personal belief in a just world correlates negatively with tax avoidance) would not have been significant ($r = -.025$, $CI = [-1, .103]$, $p = .372$); hypothesis seven (general belief in a just world correlates negatively with tax evasion) would not have been significant ($r = .053$, $CI = [-1, .180]$, $p = .753$); hypothesis nine (general belief in a just world correlates negatively with tax avoidance) would not have been significant ($r = .185$, $CI = [-1, .306]$, $p = .992$). Scatterplots for the German sample regarding the correlation hypotheses are shown in figure 6.

Moderation plots for the German sample can be found in figure 7. The interaction effect of personal relative deprivation and personal belief in a just world as predictors of tax evasion (hypothesis three) would not have been significant ($b = -0.006$, $SE = 0.012$, $CI = [-\infty, 0.015]$, $p = .317$). Likewise, the interaction effect of personal relative deprivation and personal belief in a just world as predictors of tax avoidance (hypothesis six) would not have been significant ($b = -0.003$, $SE = 0.012$, $CI = [-\infty, 0.017]$, $p = .400$). Neither would the interaction effect of personal relative deprivation and general belief in a just world as predictors of tax evasion (hypothesis eight) have been significant ($b = -0.017$, $SE = 0.021$, $CI = [-\infty, 0.018]$, $p = .213$). Similar to the results from the full sample, the interaction effect of personal relative deprivation and general belief in a just world as predictors of tax avoidance (hypothesis ten), would have been significant ($b = -0.046$, $SE = 0.0197$, $CI = [-\infty, -0.014]$, $p < .001$). However, contrary to the results of the full sample, the moderation effect was stronger in the German sample, and a reversal of the effect of personal relative deprivation on tax avoidance could be observed in the Johnson-Neyman significance regions. To assess the significance of this specific exploratory finding, a non-directional CI was constructed, in order to create a more conservative estimate: At the values of general belief in a just world > 8.672 , the effect of personal relative deprivation on tax avoidance became negative ($b = -0.399$, $SE = 0.202$, $CI = [-0.798, 0.000]$, $p = .05$).

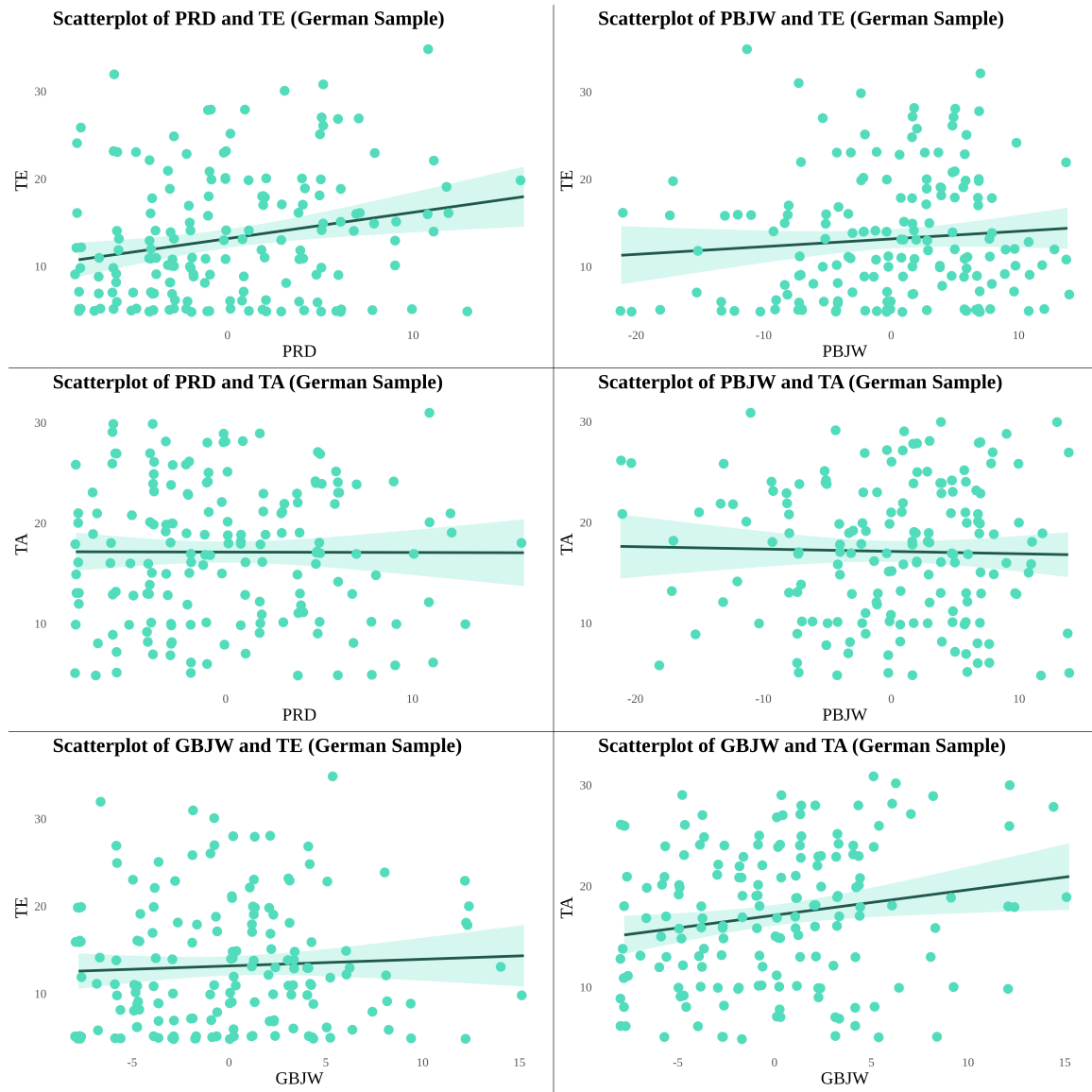
Table 16: Descriptive Statistics and Correlations for Study Variables (German Sample)

Measure	<i>M</i>	<i>SD</i>	α	1	2	3	4	5	6	7
1. PRD	13.02	5.3	.83	—						
2. GBJW	13.77	5.02	.81	-.09	—					
3. PBJW	28.17	7.37	.93	-.38***	.39***	—				
4. TA	17.13	6.82	.70	.00	.19*	-.03	—			
5. TE	13.19	7.18	.85	.22**	.05	.09	.17*	—		
6. VTC	26.86	7.8	.91	-.14	.11	.10	-.10	-.25**	—	
7. ETC	11.89	7.45	.89	.15	.21**	.07	.17*	.35***	-.32***	—
8. IT	4.08	1.34	—	-.18*	.20**	.25**	-.09	-.17*	.49***	-.28***

Note. $N = 167$. Exploratory results for the German sample. M , SD , and α represent mean, standard deviation, and coefficient alpha, respectively. * $p < .05$; ** $p < .01$; *** $p < .001$. Significance test results reported in this table are non-directional. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), tax evasion (TE), voluntary tax compliance (VTC), enforced tax compliance (ETC), and institutional trust (IT).

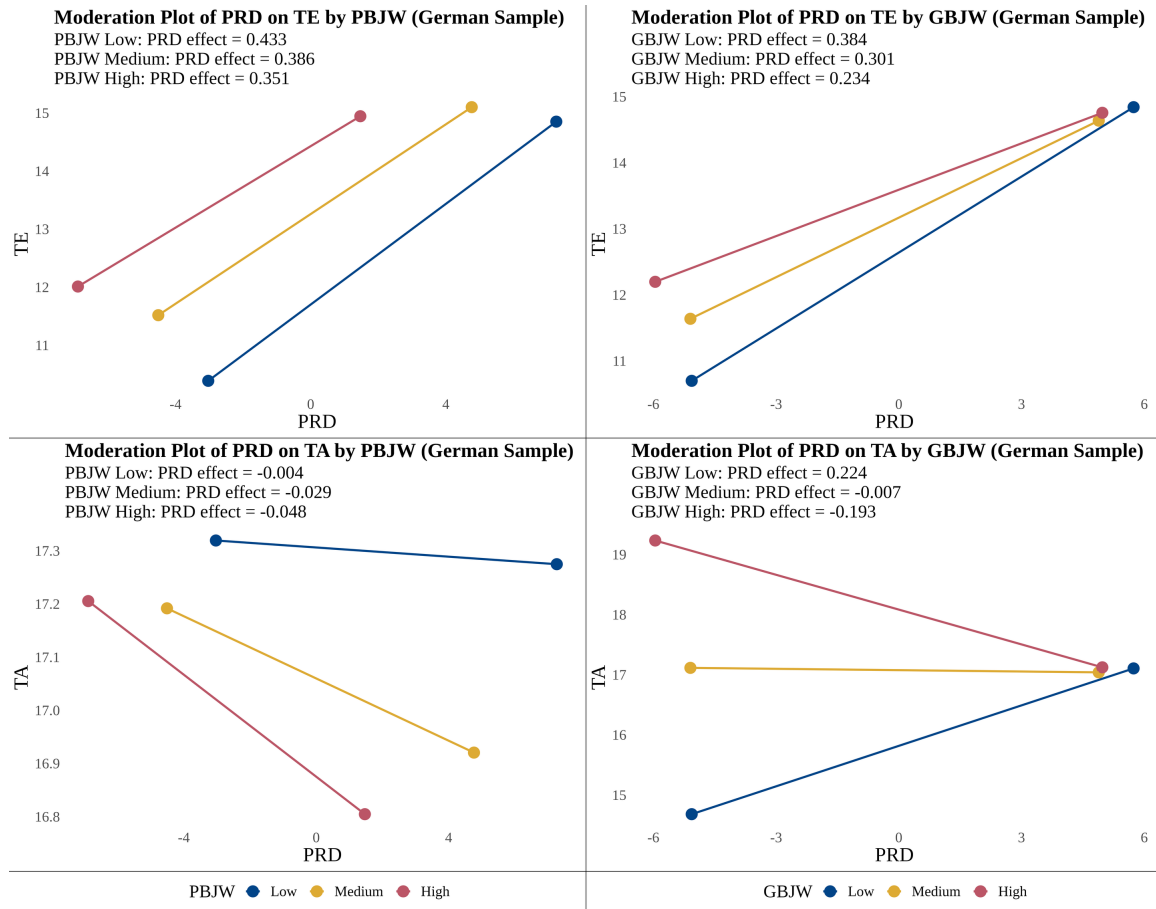
In summary, exploratory moderation results in the German sample were similar to the overall sample. The interaction of personal relative deprivation and general belief in a just world as predictors of tax avoidance, however, appeared to be even stronger in the German sample, compared to the overall sample and the English sample, indicating a strong moderation effect. Interestingly, the effect of the interaction was so strong in the German sample, that the effect of personal relative deprivation on tax avoidance was reversed, i.e. from positive to negative, with high general belief in a just world (see figure 7).

Figure 6: Scatterplots for all Correlation Hypotheses (German Sample)



Note. Regression lines with CIs were included in the scatterplots, which were constructed with point jitter for better visibility. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), and tax evasion (TE).

Figure 7: Moderation Plots (German Sample)



Note. Moderator levels: low = 16th percentile; medium = 50th percentile; high = 84th percentile. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), and tax evasion (TE).

3.9.3 English Sample

Descriptive intercorrelations were constructed non-directionally and can be found in table 17. For more detailed intercorrelation statistics including CIs and p values see table 23 in the appendix. See also the scatterplot matrix (figure 12) in the appendix for a visual representation.

The English sample had very similar results regarding the correlation hypotheses as well: Hypothesis one (personal relative deprivation correlates positively with tax evasion) would have been significant ($r = .207$, $CI = [.083, 1]$, $p = .003$); hypothesis two (personal belief in a just world correlates negatively with tax evasion) would not have been significant ($r = .022$, $CI = [-1, .147]$, $p = .612$); hypothesis four (personal relative deprivation correlates positively with tax avoidance) would not have been significant ($r = .082$, $CI = [-0.044, 1]$, $p = .142$); hypothesis five (personal belief in a just world correlates negatively with tax

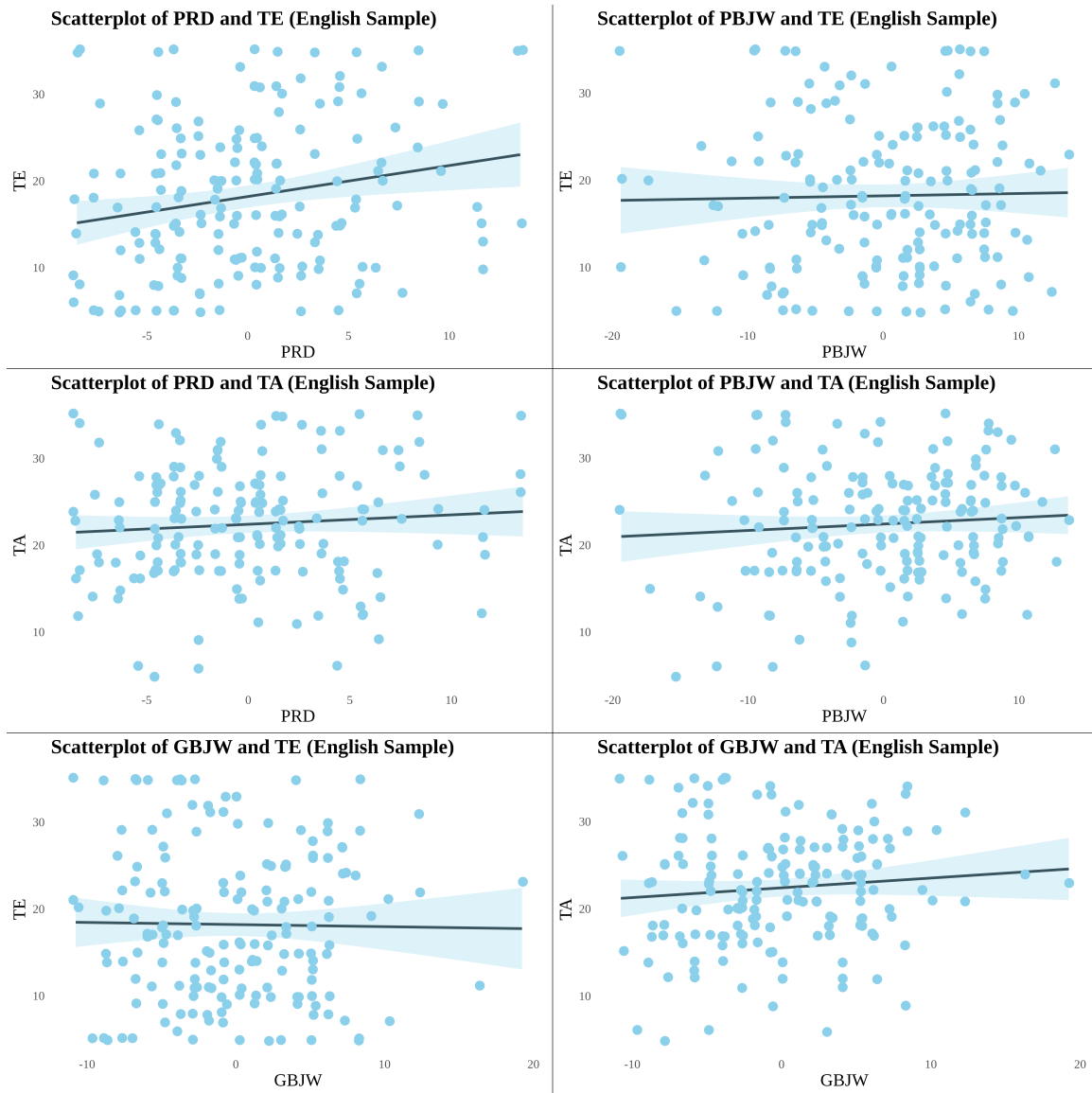
avoidance) would not have been significant ($r = .079$, $CI = [-1, .203]$, $p = .849$); hypothesis seven (general belief in a just world correlates negatively with tax evasion) would not have been significant ($r = -.016$, $CI = [-1, .110]$, $p = .419$); hypothesis nine (general belief in a just world correlates negatively with tax avoidance) would not have been significant ($r = .095$, $CI = [-1, .218]$, $p = .892$). Scatterplots for the English sample regarding the correlation hypotheses are shown in figure 8.

Table 17: Descriptive Statistics and Correlations for Study Variables (English Sample)

Measure	<i>M</i>	<i>SD</i>	α	1	2	3	4	5	6	7
1. PRD	13.48	4.98	.74	—						
2. GBJW	16.76	5.56	.75	-.13	—					
3. PBJW	26.37	7.02	.88	-.38***	.56***	—				
4. TA	22.42	6.57	.68	.08	.09	.08	—			
5. TE	18.22	8.61	.84	.21**	-.02	.02	.45***	—		
6. VTC	23.01	8.79	.90	-.17*	.13	.23**	-.14	-.39***	—	
7. ETC	17.36	8.19	.85	.18*	.19*	.09	.41***	.32***	-.28***	—
8. IT	2.65	1.67	—	-.25***	.19*	.37***	-.20*	-.25***	.52***	-.15*

Note. $N = 172$. Exploratory results for the English sample. M , SD , and α represent mean, standard deviation, and coefficient alpha, respectively. * $p < .05$; ** $p < .01$; *** $p < .001$. Significance test results reported in this table are non-directional. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), tax evasion (TE), voluntary tax compliance (VTC), enforced tax compliance (ETC), and institutional trust (IT).

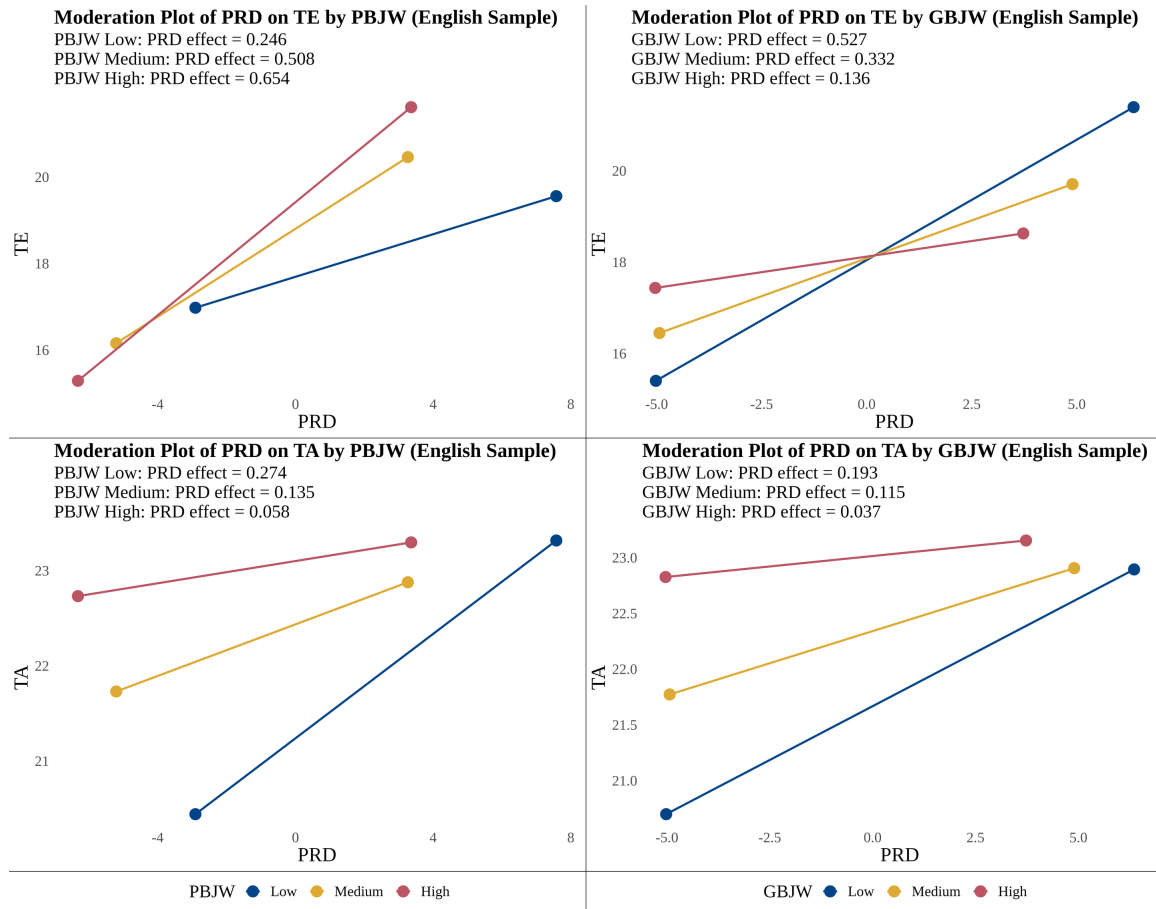
Figure 8: Scatterplots for all Correlation Hypotheses (English Sample)



Note. Regression lines with CIs were included in the scatterplots, which were constructed with point jitter for better visibility. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), and tax evasion (TE).

Overall, no moderation hypotheses could be substantiated in the English sample – see figure 9 for moderation plots of the English subsample. The interaction effect of personal relative deprivation and personal belief in a just world as predictors of tax evasion (hypothesis three) would not have been significant ($b = 0.029$, $SE = 0.018$, $CI = [-\infty, 0.059]$, $p = .945$). Likewise, the interaction effect of personal relative deprivation and personal belief in a just world as predictors of tax avoidance (hypothesis six) would not have been significant ($b = -0.015$, $SE = 0.014$, $CI = [-\infty, 0.008]$, $p = .139$). Neither would the

Figure 9: Moderation Plots (English Sample)



Note. Moderator levels: low = 16th percentile; medium = 50th percentile; high = 84th percentile. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), and tax evasion (TE).

interaction effect of personal relative deprivation and general belief in a just world as predictors of tax evasion (hypothesis eight) have been significant ($b = -0.036$, $SE = 0.026$, $CI = [-\infty, 0.007]$, $p = .084$). Contrary to the results from the full sample, the interaction effect of personal relative deprivation and general belief in a just world as predictors of tax avoidance (hypothesis ten), would not have been significant ($b = -0.014$, $SE = 0.020$, $CI = [-\infty, 0.019]$, $p = .239$).

To conclude, results in the English sample were similar to the full sample and the German sample, except for the moderation of personal relative deprivation as predictor of tax avoidance through general belief in a just world, which would not have been significant.

3.9.4 Voluntary and Enforced Tax Compliance

Voluntary tax compliance was negatively correlated with personal relative deprivation ($r = -.16, p = .003$), and positively correlated with personal belief in a just world ($r = .19, p < .001$), but not with general belief in a just world ($r = .05, p = .37$). Enforced tax compliance, on the other hand, was positively correlated with personal relative deprivation ($r = .17, p = .002$), and positively correlated with general belief in a just world ($r = .27, p < .001$), but not with personal belief in a just world ($r = .04, p = .52$).

3.9.5 Institutional Trust

Institutional trust was negatively correlated with personal relative deprivation ($r = -.22, p < .001$), and positively correlated with personal belief in a just world ($r = .33, p < .001$), but not general belief in a just world ($r = .05, p = .34$). Negative correlations were also found with both tax avoidance ($r = -.28, p < .001$) and tax evasion ($r = -.32, p < .001$). Additionally, institutional trust correlated positively with voluntary tax compliance ($r = .54, p < .001$), and negatively with enforced tax compliance ($r = -.32, p < .001$).

3.9.6 Gender Differences

A variety of gender differences were found across most variables, which are interesting in and of themselves. Gender differences of group means were calculated and are reported in table 18. No difference between genders was found for personal relative deprivation ($M_{female} = 13.05, SD_{female} = 5.35, M_{male} = 13.60, SD_{male} = 4.86, T = 0.98, p = .33$). General belief in a just world was greater in participants identifying as male ($M_{female} = 14.38, SD_{female} = 5.16, M_{male} = 16.49, SD_{male} = 5.73, T = 3.47, p < .001$). No difference between genders was found for personal belief in a just world ($M_{female} = 27.77, SD_{female} = 7.18, M_{male} = 27.12, SD_{male} = 7.11, T = -0.82, p = .41$). Tax avoidance was greater in participants identifying as male ($M_{female} = 17.57, SD_{female} = 6.98, M_{male} = 22.26, SD_{male} = 6.64, T = 6.21, p < .001$). Tax evasion was greater in participants identifying as male ($M_{female} = 13.79, SD_{female} = 7.76, M_{male} = 17.95, SD_{male} = 8.47, T = 4.59, p < .001$). Voluntary tax compliance was greater in participants identifying as female ($M_{female} = 26.19, SD_{female} = 8.35, M_{male} = 23.67, SD_{male} = 8.42, T = -2.71, p = .007$). Enforced tax compliance was greater in participants identifying as male ($M_{female} = 13.28, SD_{female} = 8.05, M_{male} = 15.96, SD_{male} = 8.11, T = 2.98, p = .003$). Institutional trust was greater in participants identifying as female ($M_{female} = 3.76, SD_{female} = 1.53, M_{male} = 2.93, SD_{male} = 1.69, T = -4.62, p < .001$).

Table 18: Comparison of Gender Means

Construct	M (overall)	SD (overall)	M (female)	SD (female)	M (male)	SD (male)	T	df
PRD	13.25	5.14	13.05	5.35	13.60	4.86	0.98	322.71
GBJW	15.29	5.50	14.38	5.16	16.49	5.73	3.47 ***	299.19
PBJW	27.25	7.24	27.77	7.18	27.12	7.11	-0.82	314.98
TA	19.82	7.19	17.57	6.98	22.26	6.64	6.21 ***	319.06
TE	15.74	8.32	13.79	7.76	17.95	8.47	4.59 ***	301.80
VTC	24.91	8.53	26.19	8.35	23.67	8.42	-2.71 **	312.88
ETC	14.67	8.29	13.28	8.05	15.96	8.11	2.98 **	313.04
IT	3.35	1.67	3.76	1.53	2.93	1.69	-4.62 ***	299.67

Note. Welch's t -test was performed for all comparisons, which were performed for female and male subgroups only, due to the small sample size of non-binary respondents. M , SD , T , and df represent mean (before centering), standard deviation, T -statistic, and degrees of freedom, respectively. * $p < .05$; ** $p < .01$; *** $p < .001$. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), tax evasion (TE), voluntary tax compliance (VTC), enforced tax compliance (ETC), and institutional trust (IT).

3.9.7 Stepwise Regression

Exploratory stepwise regression analyses were conducted using the steps function from the stats package in R, selecting a model for each outcome (tax evasion and tax avoidance) utilizing the Akaike information criterion (AIC). The predictors used for model construction were personal relative deprivation, general belief in a just world, personal belief in a just world, voluntary tax compliance, enforced tax compliance, institutional trust, female gender, and survey language version. Models were constructed with a combination of forward and backward selection of predictors, the results of which are reported in tables 19 and 20.

Table 19: Stepwise Regression for Tax Evasion

Predictor	<i>b</i>	95% CI	<i>t</i>	<i>df</i>	<i>p</i>	Status (AIC)
Intercept	15.60	[13.88, 17.32]	17.86	332	< .001	Included
ETC	0.21	[0.11, 0.31]	3.95	332	< .001	Included
VTC	-0.24	[-0.34, -0.15]	-4.90	332	< .001	Included
Female gender	-1.88	[-3.60, -0.17]	-2.16	332	.032	Included
PRD	0.30	[0.14, 0.47]	3.64	332	< .001	Included
PBJW	0.17	[0.06, 0.29]	2.90	332	.004	Included
English survey	2.25	[0.44, 4.05]	2.45	332	.015	Included
GBJW	-	-	-	-	-	Not included
IT	-	-	-	-	-	Not included

Note. Exploratory regression predicting tax evasion through enforced tax compliance (ETC), voluntary tax compliance (VTC), female gender, personal relative deprivation (PRD), personal belief in a just world (PBJW), and English survey version. CIs and *p* values result from non-directional testing. General belief in a just world (GBJW) and institutional trust (IT) failed to meet the Akaike information criterion (AIC) and were therefore not included.

3.9.8 Correlations With Demographics

For further exploration, several demographic variables were correlated with the main constructs (personal relative deprivation, general belief in a just world, personal belief in a just world, tax avoidance, tax evasion, voluntary tax compliance, enforced tax compliance, and institutional trust). Income was correlated with personal relative deprivation ($r = -.216$, $p < .001$), and personal belief in a just world ($r = .165$, $p = .004$), but not with either general belief in a just world ($r = .088$, $p = .131$), tax avoidance ($r = .072$, $p = .220$), tax

Table 20: Stepwise Regression for Tax Avoidance

Predictor	<i>b</i>	95% CI	<i>t</i>	<i>df</i>	<i>p</i>	Status (AIC)
Intercept	20.27	[18.73, 21.80]	25.98	333	< .001	Included
ETC	0.21	[0.12, 0.30]	4.59	333	< .001	Included
Female gender	-2.65	[-4.17, -1.12]	-3.42	333	.001	Included
English survey	1.89	[0.19, 3.59]	2.18	333	.030	Included
IT	-0.46	[-0.93, 0.01]	-1.91	333	.057	Included
GBJW	0.12	[-0.01, 0.26]	1.84	333	.067	Included
PRD	-	-	-	-	-	Not included
PBJW	-	-	-	-	-	Not included
VTC	-	-	-	-	-	Not included

Note. Exploratory regression model predicting tax avoidance through enforced tax compliance (ETC), female gender, English survey version, institutional trust (IT), and general belief in a just world (GBJW). CIs and *p* values result from non-directional testing. Personal relative deprivation (PRD), personal belief in a just world (PBJW) and voluntary tax compliance (VTC) failed to meet the Akaike information criterion (AIC) and were therefore not included.

evasion ($r = .012$, $p = .838$), voluntary tax compliance ($r = -.033$, $p = .572$), enforced tax compliance ($r = .011$, $p = .851$), or institutional trust ($r = .037$, $p = .530$). Formal education was not correlated with either personal relative deprivation ($r = -.078$, $p = .155$), general belief in a just world ($r = -.003$, $p = .952$), personal belief in a just world ($r = .052$, $p = .337$), tax avoidance ($r = -.046$, $p = .396$), tax evasion ($r = -.023$, $p = .678$), voluntary tax compliance ($r = .041$, $p = .453$), enforced tax compliance ($r = -.101$, $p = .063$), or institutional trust ($r = -.006$, $p = .906$). Respondent age was correlated with personal relative deprivation ($r = -.160$, $p = .003$), personal belief in a just world ($r = .154$, $p = .005$), tax avoidance ($r = -.323$, $p < .001$), tax evasion ($r = -.234$, $p < .001$), voluntary tax compliance ($r = .191$, $p < .001$), enforced tax compliance ($r = -.267$, $p < .001$), and institutional trust ($r = .354$, $p < .001$), but not with general belief in a just world ($r = -.043$, $p = .438$).

4 Discussion

Current and past research describing the influence of the justice motive on tax compliance often refers to justice-related attributes of the tax system itself. These attributes can be cat-

egorized into distributive, procedural and retributive justice (see Kirchler & Hoelzl, 2018). Some of these measures can be assessed objectively on a macro-level, e.g. the amount of tax payable by an individual compared to their received tax-funded public services; others are more subjective in nature, e.g. perceived fairness when having to interact with tax authorities (see Alm et al., 2012; Kirchler, 2021). Complementary to these conceptualizations, this study aimed to expand on the justice motive's possible influence on tax compliance by focusing on more generalized concepts of justice in the forms of personal relative deprivation and belief in a just world. These two constructs do not describe specific attributes of any representative of the tax system, nor of their interactions with taxpayers, but rather are treated as stable trait-like attributes of individual taxpayers.

One specific goal was to shed light on a possible connection between tax compliance and *subjective* deprivation (operationalized by personal relative deprivation). Using personal relative deprivation and belief in a just world as subjective measures of justice could shed light on the issue that the effect of income – which can be viewed as an objective measure of economic deprivation – on tax compliance is ambiguous (Alm et al., 2012). People do not act merely according to where they objectively stand on the economic ladder but to where they perceive themselves to be, which results from which social comparisons they make. Participants of this study, therefore, were asked in a more direct manner on how they subjectively situate themselves in comparison to similar others. The significant effect of personal relative deprivation on tax evasion points to a connection between feelings of deprivation and the readiness to engage in illegal noncompliance. However, none of the other postulated links were substantiated. The association between belief in a just world and tax compliance seems to be more complex than initially assumed, with the exploratory finding that general belief in a just world leads to higher tax avoidance being especially interesting. Personal relative deprivation not being associated with tax avoidance might possibly be explained from the observation that individuals high in personal relative deprivation tend to have lower incomes. These participants might therefore lack the resources to find avenues of creatively avoiding taxes through legal loopholes, especially so considering that three of the five survey items measuring tax avoidance required to spend money for some form of deductible expense. Lower income individuals might have scored low in tax avoidance because they sometimes do not have the financial liquidity to engage in the legal tax-saving activities described in the survey items. This points to the question whether, if this subgroup wants to save on taxes, the only avenue they have is to engage in evasion rather than avoidance.

In the exploratory part of this study, several noteworthy links were discovered. First, the correlation results of this study indicate that general belief in a just world predicts tax avoidance (and not tax evasion), and personal relative deprivation predicts tax evasion (and not tax avoidance), which holds true for both the full sample and the German sample.

In the English sample, only the link between personal relative deprivation and tax evasion remains significant. One way of interpreting the link between general belief in a just world and tax avoidance could be that individuals who engage in legal means of tax noncompliance, e.g. through loopholes in the tax law, do not view their actions as unethical, since they subscribe to the notion that, because the world is just, these loopholes must be just as well. These individuals might believe that, because they live in a world that rewards only those deserving, they themselves are deserving of the money that is saved by discovering and using these tax loopholes. In other words: the world is just, therefore all means of reducing taxes that are legally provided by the world must necessarily also be just. Another way of looking at it is that, because justice is so abundant in the world – from the viewpoint of people with a strong belief in a just world – certain transgressions (such as academic cheating or tax avoidance) are negligible in the grand scheme of things and therefore not worth considering. Interestingly, the link between general belief in a just world and tax avoidance is consistent with the finding of Münscher (2022), who reports a positive correlation between general belief in a just world and academic cheating. Both tax avoidance and academic cheating fall into the category of noncompliant behavior, so there might exist a shared underlying explanatory mechanism to explore. Second, distinct crosswise correlations between general belief in a just world and enforced tax compliance, and personal belief in a just world and voluntary tax compliance indicate that it makes sense to differentially measure justice-related perceptions for self and general justice if compliance is researched. In other words, peoples actions are influenced by their beliefs about justice, but they differentiate justice for themselves and justice in general, and these dimensions yield each their own outcomes when it comes to compliance. Third, in the German sample the moderating effect of general belief in a just world on the relationship between personal relative deprivation and tax avoidance was so strong that the relationship was *reversed* with high general belief in a just world. This result could imply that for individuals who subscribe to a high general belief in a just world, tax avoidance might potentially be reduced by personal relative deprivation. Fourth, institutional trust was found to be negatively associated with tax evasion, tax avoidance, and enforced tax compliance, and positively with voluntary tax compliance, which is consistent with the predictions of the slippery-slope framework (Gangl et al., 2019; Kirchler et al., 2008).

One of several limitations of this study is that it is not experimental. None of the correlational findings, therefore, can be positioned in any causal pathway, outside of theoretical speculation. It is, for example, unclear whether personal relative deprivation causes noncompliance or, noncompliance being caused by other factors, an individual engaging in noncompliance needs to justify this behavior by telling themselves that they were deprived beforehand, which is why they had to do it. A feedback loop can be assumed, with personal relative deprivation potentiating noncompliant behavior and vice versa, over time.

The same could be true for the found association between general belief in a just world and noncompliance. Regarding testing for significance of the proposed links between constructs, the formulation of hypotheses as explicitly testing for correlations limited the possibilities for alternative avenues of statistical modeling. A more robust analytical approach could have been realized, for example, through a series of blockwise regressions, with demographic variables – such as income or gender – being entered first, in order to control for their statistical influence. The study depended on honest answers by participants, which, given the potentially delicate subject of compliance with the law, cannot necessarily be relied upon without sceptic reservation. From the same notion, the possibility of self-selection bias must be taken into consideration. Based on the necessity of acquiring a rather large sample size without much possibility of incentivizing participation, a recruiting strategy was employed that resulted in a convenience sample. Generalisability of the findings reported here, therefore, should be viewed with caution. Another limitation concerns the fact that the survey was conducted in two languages. The issue with that is that two survey language versions might potentially measure slightly different things, because of divergences in meaning, originating from translation. Nevertheless, internal consistencies were acceptable in the overall sample, as well as in both language subsamples for all constructs. Also worth noting is that the two language samples were different in several ways regarding recruiting source and demographic properties. Participants from the English sample were recruited mainly from Reddit whereas in the German sample, the majority of participants was recruited from professional associations and networks. Additionally, 64.5% identified as male in the English sample, whereas 76.6% identified as female in the German sample. The median birth year in the English sample was 1989, compared to 1976 in the German sample. These differences were addressed, however, in the exploratory results section, by conducting the relevant statistical analyses for each survey version separately. Participants' countries of residence were highly divergent across the two subsamples. Their respective numbers of participants were not evenly distributed overall, as is summarized in table 2. In addition to that, the non-selective inclusion of countries of residence from diverging levels of economic development and, therefore, mean income levels, resulted in more heterogeneity.

Future research could focus on the justice motive on a *group level* – Wenzel (2003), for example, points out the hypothetical role of group deprivation (as opposed to personal deprivation) as an “act of social protest against a tax system perceived to be unfair to their ingroup” (p. 43). One possible avenue for future investigations of a possible link between personal relative deprivation and tax compliance would be experimentally inducing deprivation. This would generate *state* personal relative deprivation (as opposed to personal relative deprivation as a *trait*), and causal hypotheses regarding the relationship between personal relative deprivation and tax compliance could be investigated. For example, deprivation could be induced via a setting in which participants receive differing amounts of

money. They could then be informed of the differences (inducing deprivation), and then be asked to fill out a tax form – the degree of honesty operationalizing tax compliance. A similar design could be employed for investigating the link between belief in a just world and tax compliance: one group of participants could be exposed to justice-related stimuli beforehand, heightening the salience of justice and thereby activating belief in a just world pathways. The reversal of the effect of personal relative deprivation on tax avoidance for individuals who score high in general belief in a just world could be further investigated in a more homogenous sample. In addition to that, the effect – if it can be replicated – could be examined for other forms of compliance. Another area, which is related to perceived equity during the taxation process, is procedural fairness. If interactions with the authority are being perceived as generally fair and positive, another way of reducing feelings of inequity could be achieved by the individual focusing on the *procedural fairness* aspect instead of on the deprivation. A possible avenue for future research could explore the question of whether belief in a just world leads to higher perceived procedural fairness.

The question remains of how the results of this investigation could be of practical relevance. From a public messaging perspective, policymakers could be advised to take into consideration the following propositions: (1) Given that, as the exploratory findings suggest, personal relative deprivation is positively related to tax evasion and negatively to institutional trust, information tailored to induce feelings of inequity should be avoided. (2) Personal belief in a just world seems to predict both voluntary tax compliance and institutional trust, which suggests that messages heightening the salience of equity on a personal level should be integrated when issuing communications to taxpayers. (3) Messaging that focuses on *general* societal equity could potentially be inducing noncompliance in the form of tax avoidance. However, more robust – that is, experimental – studies are needed before any causal inferences like this can be made with certainty.

This study aimed to add to the existing host of literature on the links between the justice motive and tax compliance, by focusing on operationalizations of the justice motive which, until recently, were not researched in this configuration. Although its principal hypotheses could, for the most part, not be substantiated, this investigation resulted in several interesting exploratory findings. Society depends on the social conscience and solidarity of the individuals who are its members. As stated before, I believe that shedding light on the underlying factors which can potentiate or diminish these prerequisites of societal functioning is a task worth undertaking.

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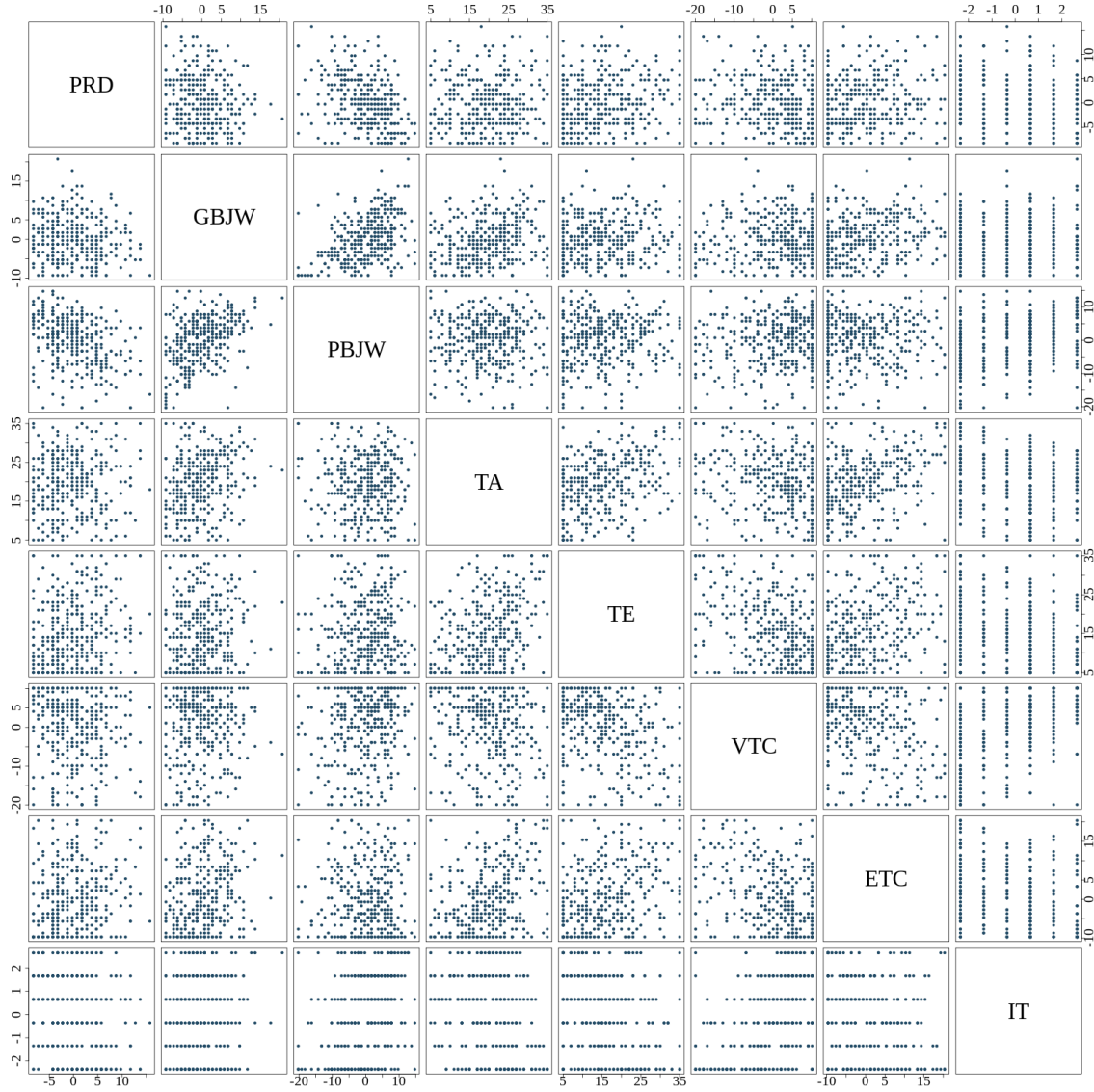
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6 Appendix

6.1 Figures

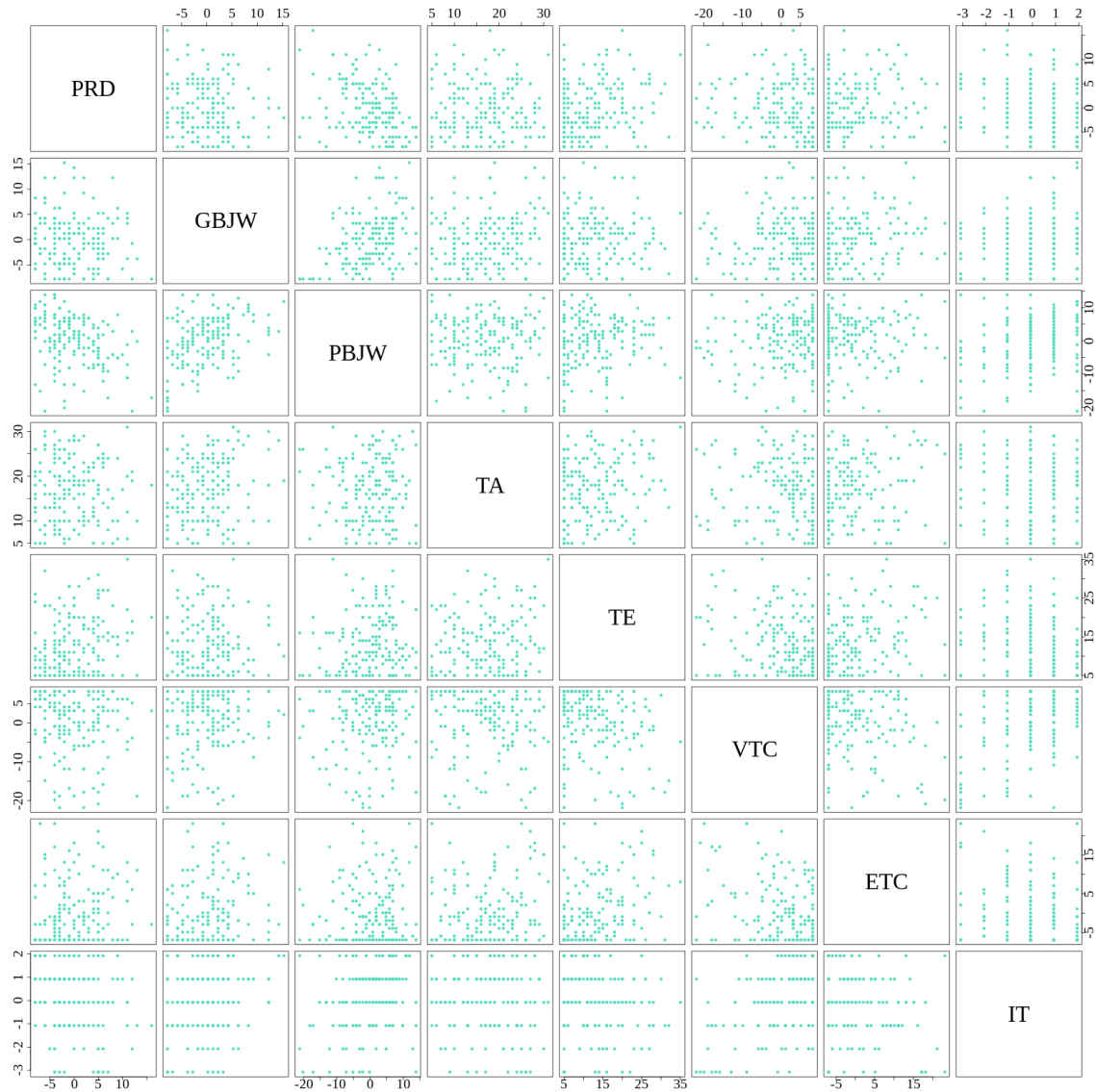
6.1.1 Scatterplot Matrices

Figure 10: Scatterplot Matrix for all Main Constructs (Full Sample)



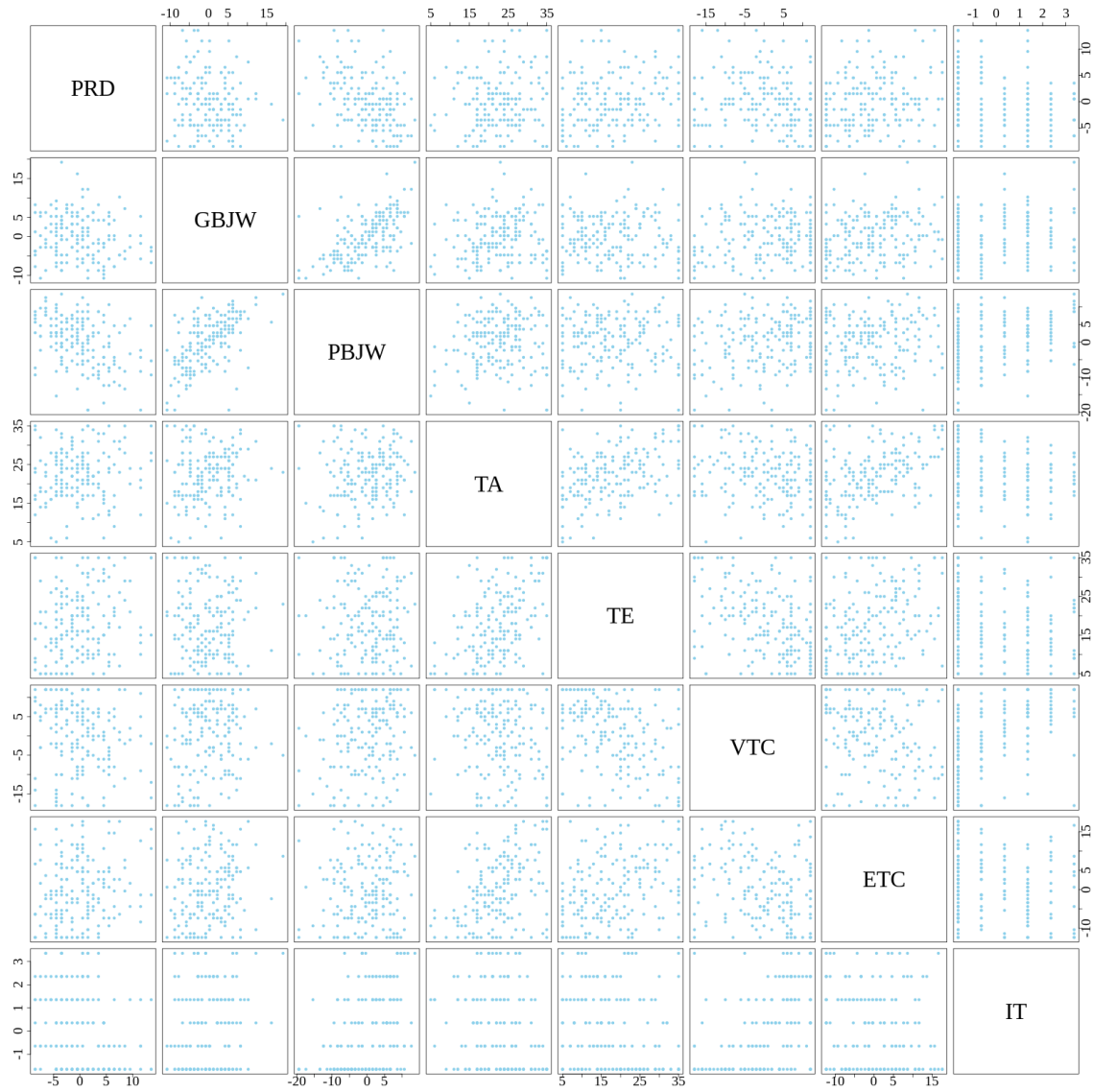
Note. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), tax evasion (TE), voluntary tax compliance (VTC), enforced tax compliance (ETC), and institutional trust (IT).

Figure 11: Scatterplot Matrix for all Main Constructs (German Sample)



Note. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), tax evasion (TE), voluntary tax compliance (VTC), enforced tax compliance (ETC), and institutional trust (IT).

Figure 12: Scatterplot Matrix for all Main Constructs (English Sample)



Note. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), tax evasion (TE), voluntary tax compliance (VTC), enforced tax compliance (ETC), and institutional trust (IT).

6.1.2 Survey Screenshots

Figure 13: Survey Start Page

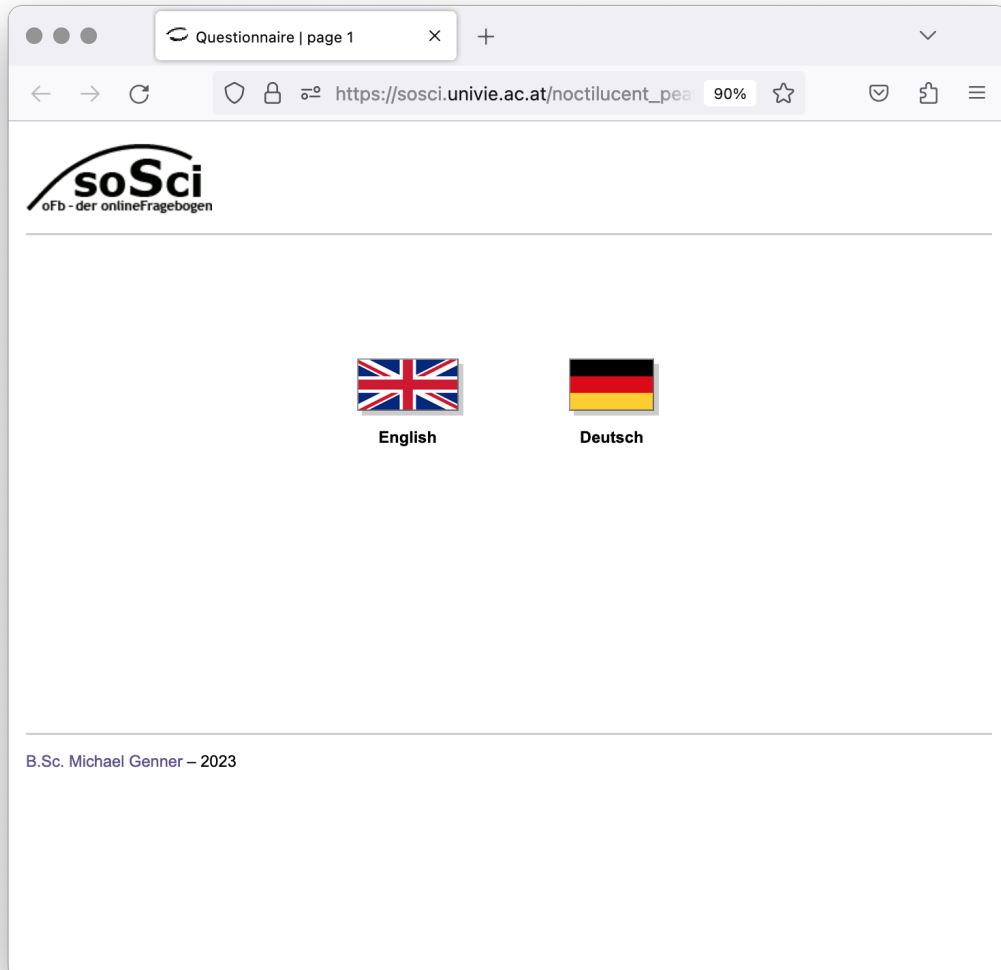
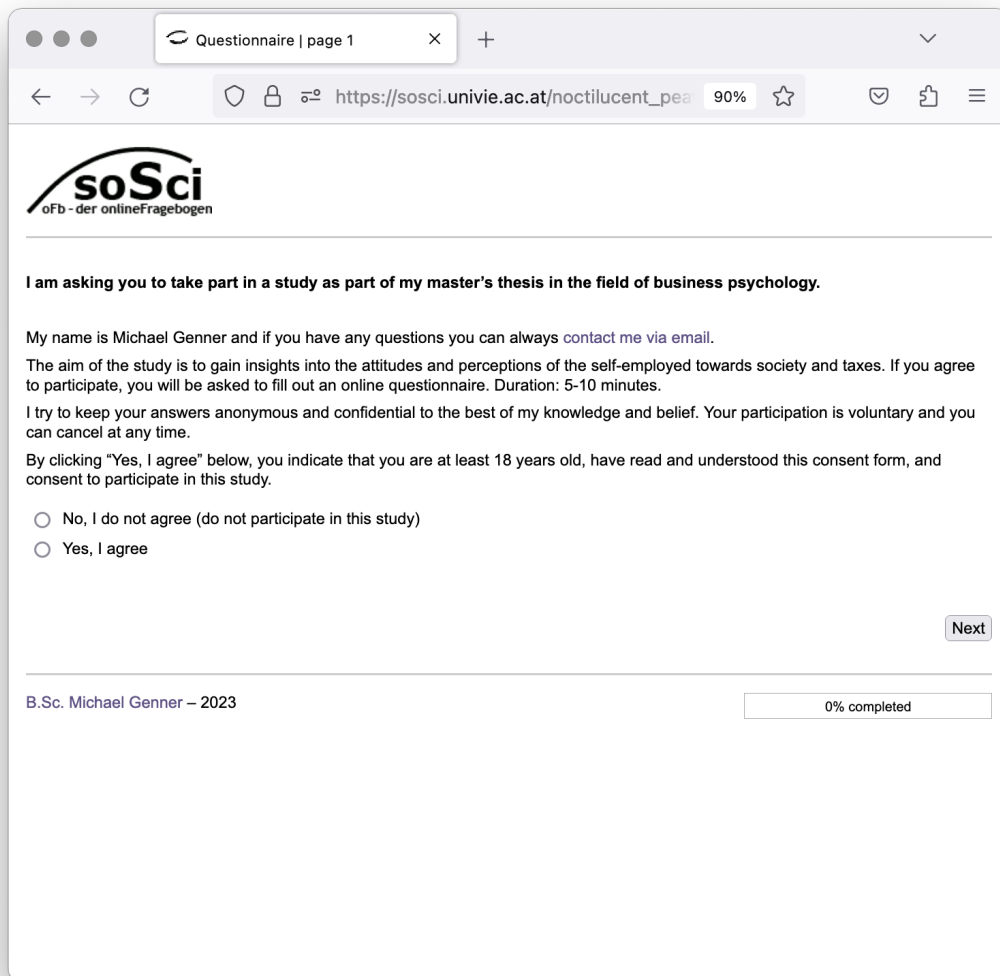


Figure 14: English Questionnaire Page 1



The screenshot shows a web browser window with the title "Questionnaire | page 1". The address bar displays the URL "https://sosci.univie.ac.at/noctilucent_pea" with a "90%" loading indicator. The page features the "soSci" logo, which includes the text "oFb - der onlineFragebogen". The main content area contains the following text:

I am asking you to take part in a study as part of my master's thesis in the field of business psychology.

My name is Michael Genner and if you have any questions you can always [contact me via email](#).

The aim of the study is to gain insights into the attitudes and perceptions of the self-employed towards society and taxes. If you agree to participate, you will be asked to fill out an online questionnaire. Duration: 5-10 minutes.

I try to keep your answers anonymous and confidential to the best of my knowledge and belief. Your participation is voluntary and you can cancel at any time.

By clicking "Yes, I agree" below, you indicate that you are at least 18 years old, have read and understood this consent form, and consent to participate in this study.

☐ No, I do not agree (do not participate in this study)

☐ Yes, I agree

A "Next" button is located at the bottom right of the main content area.

At the bottom of the page, the text "B.Sc. Michael Genner – 2023" is displayed on the left, and a progress bar on the right shows "0% completed".

Figure 15: English Questionnaire Page 2

The screenshot shows a web browser window with the title "Questionnaire | page 2". The address bar displays the URL "https://sosci.univie.ac.at/noctilucent_pea" with a 90% completion indicator. The page features the "soSci" logo, which includes the text "oFb - der onlineFragebogen". The main content area contains the question "Are you self-employed?" with three radio button options: "Yes", "Partly", and "No". A "Next" button is located to the right of the options. At the bottom of the page, the text "B.Sc. Michael Genner – 2023" is displayed on the left, and a progress bar on the right indicates "8% completed".

Questionnaire | page 2

https://sosci.univie.ac.at/noctilucent_pea 90%

soSci
oFb - der onlineFragebogen

Are you self-employed?

☐ Yes

☐ Partly

☐ No

Next

B.Sc. Michael Genner – 2023

8% completed

Figure 16: English Questionnaire Page 3

Questionnaire | page 3

https://sosci.univie.ac.at/noctilucent_pea 90%

soSci
oFb - der onlineFragebogen

Below you will find different statements on the subject of justice. Read the statements and indicate how much you agree.
Please don't skip a line.

I don't agree I strongly agree

I think basically the world is a just place. ○ ○ ○ ○ ○ ○ ○

I believe that, by and large, people get what they deserve. ○ ○ ○ ○ ○ ○ ○

I am confident that justice always prevails over injustice. ○ ○ ○ ○ ○ ○ ○

I am convinced that in the long run people will be compensated for injustices. ○ ○ ○ ○ ○ ○ ○

I firmly believe that injustices in all areas of life (e.g., professional, family, politics) are the exception rather than the rule. ○ ○ ○ ○ ○ ○ ○

I think people try to be fair when making important decisions. ○ ○ ○ ○ ○ ○ ○

Next

B.Sc. Michael Genner – 2023 15% completed

Figure 17: English Questionnaire Page 4

Questionnaire | page 4

https://sosci.univie.ac.at/noctilucent_pea 90%

soSci
oFb - der onlineFragebogen

Below you will find different statements on the subject of justice. Read the statements and indicate how much you agree.
Please don't skip a line.

I don't agree I strongly agree

I believe that, by and large, I deserve what happens to me. ☐ ☐ ☐ ☐ ☐ ☐ ☐

I am usually treated fairly. ☐ ☐ ☐ ☐ ☐ ☐ ☐

I believe that I usually get what I deserve. ☐ ☐ ☐ ☐ ☐ ☐ ☐

Overall, events in my life are just. ☐ ☐ ☐ ☐ ☐ ☐ ☐

In my life injustice is the exception rather than the rule. ☐ ☐ ☐ ☐ ☐ ☐ ☐

I believe that most of the things that happen in my life are fair. ☐ ☐ ☐ ☐ ☐ ☐ ☐

I think that important decisions that are made concerning me are usually just. ☐ ☐ ☐ ☐ ☐ ☐ ☐

Next

B.Sc. Michael Genner – 2023

23% completed

Figure 18: English Questionnaire Page 5

Questionnaire | page 5

https://sosci.univie.ac.at/noctilucent_pea 90%

soSci
oFb - der onlineFragebogen

Below you will find different statements on the subject of deprivation. Read the statements and indicate how much you agree.
Please don't skip a line.

I don't agree I strongly agree

I feel deprived when I think about what I have compared to what other people like me have. ☐ ☐ ☐ ☐ ☐ ☐

I feel privileged compared to other people like me. ☐ ☐ ☐ ☐ ☐ ☐

I feel resentful when I see how prosperous other people like me seem to be. ☐ ☐ ☐ ☐ ☐ ☐

When I compare what I have with what others like me have, I realize that I am quite well off. ☐ ☐ ☐ ☐ ☐ ☐

I feel dissatisfied with what I have compared to what other people like me have. ☐ ☐ ☐ ☐ ☐ ☐

Next

B.Sc. Michael Genner – 2023 31% completed

Figure 19: English Questionnaire Page 6

Questionnaire | page 6

https://sosci.univie.ac.at/noctilucent_pea 90%

soSci
oFb - der onlineFragebogen

Below you will find different statements on the subject of taxes. Read the statements and indicate how much you agree.
Please don't skip a line.

When I pay my taxes as required by the regulations, I do so . . .

I don't agree I strongly agree

. . . because to me it's obvious that this is what you do. ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

. . . to support the state and other citizens. ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

. . . because I like to contribute to everyone's good. ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

. . . because for me it's the natural thing to do. ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

. . . because I regard it as my duty as citizen. ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Next

B.Sc. Michael Genner – 2023

38% completed

Figure 20: English Questionnaire Page 7

Questionnaire | page 7

https://sosci.univie.ac.at/noctilucent_pea 90%

soSci
oFb - der onlineFragebogen

Below you will find different statements on the subject of taxes. Read the statements and indicate how much you agree.
Please don't skip a line.

When I pay my taxes as required by the regulations, I do so . . .

I don't agree I strongly agree

. . . because a great many tax audits are carried out. ○ ○ ○ ○ ○ ○ ○ ○

. . . because the tax office often carries out audits. ○ ○ ○ ○ ○ ○ ○ ○

. . . because I know that I will be audited. ○ ○ ○ ○ ○ ○ ○ ○

. . . because the punishments for tax evasion are very severe. ○ ○ ○ ○ ○ ○ ○ ○

. . . because I do not know exactly how to evade taxes without attracting attention. ○ ○ ○ ○ ○ ○ ○ ○

Next

B.Sc. Michael Genner – 2023

46% completed

Figure 21: English Questionnaire Page 8

Questionnaire | page 8

https://sosci.univie.ac.at/noctilucent_pea 90%

soSci
oFb - der onlineFragebogen

very unlikely very likely

You could take a detailed look at the tax regulations yourself to search for potential savings. How likely would you be to take this detailed look at the tax regulations? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

You could install soundproof windows in your private dwelling and claim the resulting cost as housing space reconstruction on your income tax return. This would have the effect of reducing your tax burden. How likely would you be to carry out the housing space reconstruction? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

You could attend a course which informs you about the current possibilities for making claims against tax. How likely would you be to attend such a course? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

You could buy low-value assets (e.g., PC, scanner, and other purchased equipment with a value below \$ 400, –) which you do not currently need for your company, so as to decrease the figure on which your tax calculation is based. How likely would you be to purchase such assets? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

You could deduct against tax the training costs you incurred for your employees as an allowable deduction for education and training. How likely is it that you would use the allowable deduction for education and training? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Next

B.Sc. Michael Genner – 2023

54% completed

Figure 22: English Questionnaire Page 9

Questionnaire | page 9

https://sosci.univie.ac.at/noctilucent_pea 90%

soSci
oFb - der onlineFragebogen

very unlikely very likely

A customer paid in cash and did not require an invoice. You could intentionally omit this income on your income tax return. How likely is it that you would omit this income?

○ ○ ○ ○ ○ ○ ○ ○

You bought some of your goods privately. You could resell those goods later to established customers and omit the profit from this sale on your income tax return. How likely would you be to omit the profit from this sale on your income tax return?

○ ○ ○ ○ ○ ○ ○ ○

You could intentionally declare restaurant bills for meals you had with your friends as business meals. How likely would you be to declare those restaurant bills as business meals?

○ ○ ○ ○ ○ ○ ○ ○

You have been abroad to meet relatives and to have a short meeting with one of your suppliers. Regardless of this you could declare your expenses for the hotel and for the meals you invited your relatives to, as business travel and a business meal. How likely would you be to declare your expenses as business travel or a business meal?

○ ○ ○ ○ ○ ○ ○ ○

Recently you took part in a project in an acquaintance's company. Now you could conceal this taxable additional income on your income tax return. How likely is it that you would conceal this additional income?

○ ○ ○ ○ ○ ○ ○ ○

Next

B.Sc. Michael Genner – 2023

62% completed

Figure 23: English Questionnaire Page 10

Questionnaire | page 10

https://sosci.univie.ac.at/noctilucent_pea 90%

soSci
oFb - der onlineFragebogen

I don't agree I strongly agree

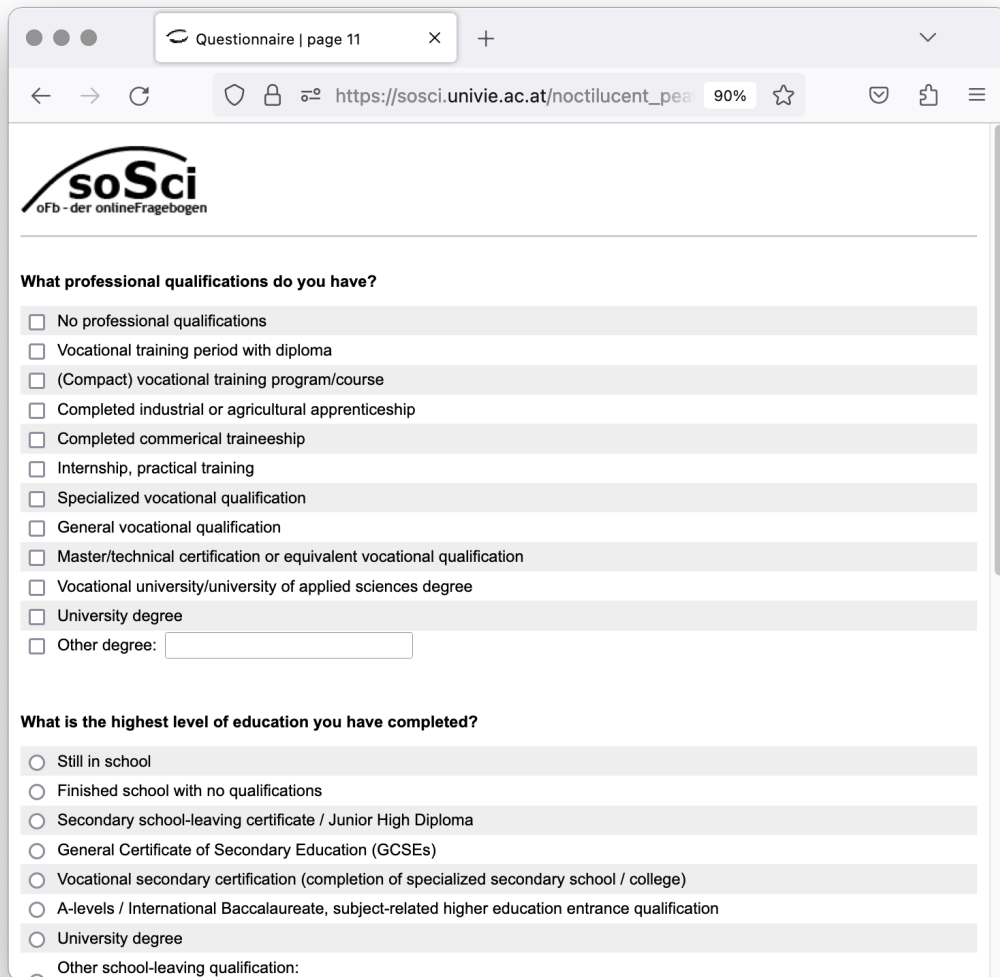
I trust the tax authority in my country.

Next

B.Sc. Michael Genner – 2023

69% completed

Figure 24: English Questionnaire Page 11 (1)



Questionnaire | page 11

https://sosci.univie.ac.at/noctilucent_pea 90%

soSci
oFb - der onlineFragebogen

What professional qualifications do you have?

- ☐ No professional qualifications
- ☐ Vocational training period with diploma
- ☐ (Compact) vocational training program/course
- ☐ Completed industrial or agricultural apprenticeship
- ☐ Completed commercial traineeship
- ☐ Internship, practical training
- ☐ Specialized vocational qualification
- ☐ General vocational qualification
- ☐ Master/technical certification or equivalent vocational qualification
- ☐ Vocational university/university of applied sciences degree
- ☐ University degree
- ☐ Other degree:

What is the highest level of education you have completed?

- ☐ Still in school
- ☐ Finished school with no qualifications
- ☐ Secondary school-leaving certificate / Junior High Diploma
- ☐ General Certificate of Secondary Education (GCSEs)
- ☐ Vocational secondary certification (completion of specialized secondary school / college)
- ☐ A-levels / International Baccalaureate, subject-related higher education entrance qualification
- ☐ University degree
- ☐ Other school-leaving qualification:

Figure 25: English Questionnaire Page 11 (2)

Questionnaire | page 11

https://sosci.univie.ac.at/noctilucent_pea 90%

☐ General Certificate of Secondary Education (GCSEs)

☐ Vocational secondary certification (completion of specialized secondary school / college)

☐ A-levels / International Baccalaureate, subject-related higher education entrance qualification

☐ University degree

☐ Other school-leaving qualification:

What is your monthly gross income?

Gross income is defined as your total income before tax and social security deductions.

☐ I do not have a personal income

☐ less than 250 \$

☐ 250 \$ up to 500 \$

☐ 500 \$ up to 1000 \$

☐ 1000 \$ up to 1500 \$

☐ 1500 \$ up to 2000 \$

☐ 2000 \$ up to 2500 \$

☐ 2500 \$ up to 3000 \$

☐ 3000 \$ up to 3500 \$

☐ 3500 \$ up to 4000 \$

☐ 4000 \$ or more

☐ I do not wish to answer

Next

B.Sc. Michael Genner – 2023

77% completed

Figure 26: English Questionnaire Page 12

Questionnaire | page 12

https://sosci.univie.ac.at/noctilucent_pea 90%

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In which country do you currently live?

Country: ☐ I prefer not to answer

Which of these best describe(s) your gender identity?

☐ Female

☐ Male

☐ Non-binary

☐ Others (please state):

☐ I prefer not to say

What is your year of birth?

Year of birth:

Next

B.Sc. Michael Genner – 2023

85% completed

Figure 27: English Questionnaire Page 13

Questionnaire | page 13

https://sosci.univie.ac.at/noctilucent_pea 90%

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oFb - der onlineFragebogen

Where did you learn about this study?

- ☐ Facebook
- ☐ Instagram
- ☐ Reddit
- ☐ Survey Circle
- ☐ Word of mouth
- ☐ Other (please specify):

Have you carried out all the tasks as described in the respective instructions? Please reply honestly – this answer has no consequences for you!

- ☐ I have completed all the tasks as requested in the instructions.
- ☐ I sometimes clicked something because I was unmotivated or simply did not know.
- ☐ I have often clicked something, so I am quickly done.

Could you complete the questionnaire in one without being distracted? Please reply honestly.

- ☐ Yes, I have given the study full attention and gone through it in one.
- ☐ I was distracted by my environment (people, noises, etc.) once.
- ☐ I was distracted by my environment (people, noises, etc.) several times.

Next

Figure 28: English Questionnaire Page 14

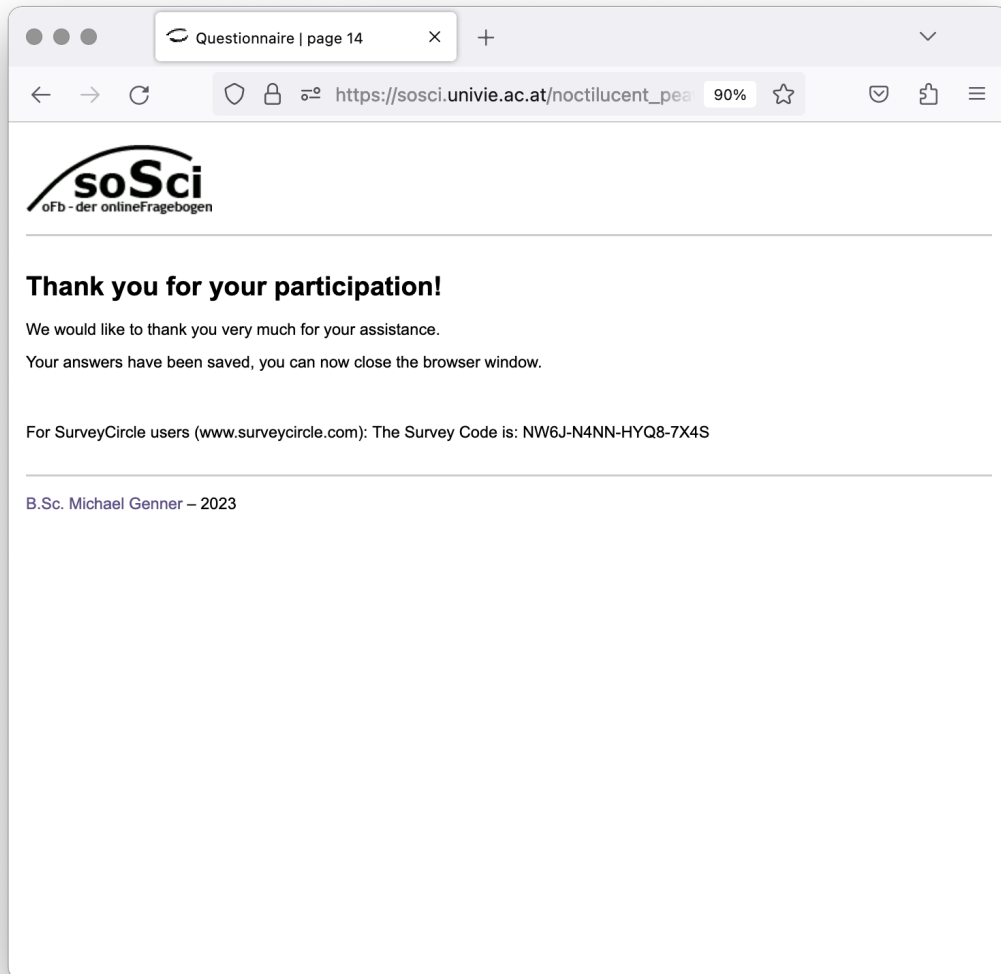


Figure 29: German Questionnaire Page 1

Fragebogen zusammenstellen x Fragebogen | Seite 1 x + v

← → ↻ 🔒 🔓 🔗 https://sosci.univie.ac.at/noctilucent 📄 90% ☆ 📧 📎 ☰

soSci
oFb - der onlineFragebogen

Ich ersuche Sie, an einer Studie im Rahmen meiner Masterarbeit im Bereich Wirtschaftspsychologie teilzunehmen.

Mein Name ist Michael Genner und wenn Sie Fragen haben, können Sie mich jederzeit [via E-Mail](#) kontaktieren.

Das Ziel der Studie ist es, Einblicke in Einstellungen und die Wahrnehmung von Selbständigen zur Gesellschaft und zu Steuern zu gewinnen. Wenn Sie der Teilnahme zustimmen, werden Sie gebeten, einen Online-Fragebogen auszufüllen. Dauer: 5-10 Minuten.

Ich bemühe mich, nach bestem Wissen und Gewissen Ihre Antworten anonym und vertraulich zu halten. Ihre Teilnahme ist freiwillig und Sie können jederzeit abbrechen.

Indem Sie unten auf „Ja, ich stimme zu“ klicken, geben Sie an, dass Sie mindestens 18 Jahre alt sind, diese Einwilligungserklärung gelesen und verstanden haben und der Teilnahme an dieser Studie zustimmen.

☐ Nein, ich stimme nicht zu (nicht an dieser Studie teilnehmen)

☐ Ja, ich stimme zu

Weiter

B.Sc. Michael Genner – 2023

0% ausgefüllt

Figure 30: German Questionnaire Page 2

Fragebogen zusammenstellen × Fragebogen | Seite 2 × + ✓

← → ↻ 🔒 https://sosci.univie.ac.at/noctilucent_pea 90% ☆ 🔒 📄 ☰

soSci
oFb - der onlineFragebogen

Sind Sie selbständig erwerbstätig?

☐ Ja

☐ Teilweise

☐ Nein

Weiter

B.Sc. Michael Genner – 2023 8% ausgefüllt

Figure 31: German Questionnaire Page 3

Fragebogen zusammenstellen × Fragebogen | Seite 3 × + ✓

← → ↺ 🔒 https://sosci.univie.ac.at/noctilucent_pea 90% ☆ 🔍 ☰

soSci
oFb - der onlineFragebogen

Im Folgenden finden Sie unterschiedliche Aussagen zum Thema Gerechtigkeit. Lesen Sie die Aussagen und geben Sie an, wie sehr Sie zustimmen.
Bitte lassen Sie keine Zeile aus.

Ich stimme nicht zu Ich stimme stark zu

Ich finde, dass es auf der Welt im allgemeinen gerecht zugeht.	☐ ☐ ☐ ☐ ☐ ☐
Ich glaube, dass die Leute im Großen und Ganzen das bekommen, was ihnen gerechterweise zusteht.	☐ ☐ ☐ ☐ ☐ ☐
Ich bin sicher, dass immer wieder die Gerechtigkeit in der Welt die Oberhand gewinnt.	☐ ☐ ☐ ☐ ☐ ☐
Ich bin überzeugt, dass irgendwann jede/r für erlittene Ungerechtigkeit entschädigt wird.	☐ ☐ ☐ ☐ ☐ ☐
Ungerechtigkeiten sind nach meiner Auffassung in allen Lebensbereichen (z.B. Beruf, Familie, Politik) eher die Ausnahme als die Regel.	☐ ☐ ☐ ☐ ☐ ☐
Ich denke, dass sich bei wichtigen Entscheidungen alle Beteiligten um Gerechtigkeit bemühen.	☐ ☐ ☐ ☐ ☐ ☐

[Weiter](#)

B.Sc. Michael Genner – 2023 15% ausgefüllt

Figure 32: German Questionnaire Page 4

Fragebogen zusammenstellen x Fragebogen | Seite 4 x + v

← → ↺ https://sosci.univie.ac.at/noctilucent_pea 90% ☆ 🔍 ☰

soSci
oFb - der onlineFragebogen

Im Folgenden finden Sie unterschiedliche Aussagen zum Thema Gerechtigkeit. Lesen Sie die Aussagen und geben Sie an, wie sehr Sie zustimmen.
Bitte lassen Sie keine Zeile aus.

Ich stimme nicht zu Ich stimme stark zu

Im Großen und Ganzen finde ich, dass ich mein Schicksal verdiene.	☐ ☐ ☐ ☐ ☐ ☐
In der Regel fühle ich mich gerecht behandelt.	☐ ☐ ☐ ☐ ☐ ☐
Meiner Meinung nach bekomme ich im Großen und Ganzen, was mir gerechterweise zusteht.	☐ ☐ ☐ ☐ ☐ ☐
Mein Leben verläuft im Großen und Ganzen gerecht.	☐ ☐ ☐ ☐ ☐ ☐
In meinem Leben sind Ungerechtigkeiten eher die Ausnahme als die Regel.	☐ ☐ ☐ ☐ ☐ ☐
Meiner Meinung nach geht es in meinem Leben im allgemeinen gerecht zu.	☐ ☐ ☐ ☐ ☐ ☐
Ich finde, dass mir bei wichtigen Entscheidungen im Großen und Ganzen Gerechtigkeit widerfährt.	☐ ☐ ☐ ☐ ☐ ☐

[Weiter](#)

B.Sc. Michael Genner – 2023 23% ausgefüllt

Figure 33: German Questionnaire Page 5

Fragebogen zusammenstellen × Fragebogen | Seite 5 × + ✓

← → ↻ 🔒 https://sosci.univie.ac.at/noctilucent_pea 90% ☆ 🔍 ☰

soSci
oFb - der onlineFragebogen

Im Folgenden finden Sie unterschiedliche Aussagen zum Thema Benachteiligung. Lesen Sie die Aussagen und geben Sie an, wie sehr Sie zustimmen.
Bitte lassen Sie keine Zeile aus.

Ich stimme nicht zu Ich stimme stark zu

Ich fühle mich benachteiligt, wenn ich darüber nachdenke, was ich habe, verglichen mit dem, was andere, mir ähnliche Menschen haben. ○ ○ ○ ○ ○ ○ ○

Ich fühle mich privilegiert im Vergleich zu anderen, mir ähnlichen Menschen. ○ ○ ○ ○ ○ ○ ○

Ich ärgere mich, wenn ich sehe, wie wohlhabend andere, mir ähnliche Menschen zu sein scheinen. ○ ○ ○ ○ ○ ○ ○

Wenn ich das, was ich habe, mit dem vergleiche, was andere, mir ähnliche Menschen haben, stelle ich fest, dass ich ziemlich gut dran bin. ○ ○ ○ ○ ○ ○ ○

Ich bin unzufrieden mit dem, was ich habe, verglichen mit dem, was andere, mir ähnliche Menschen haben. ○ ○ ○ ○ ○ ○ ○

Weiter

B.Sc. Michael Genner – 2023 31% ausgefüllt

Figure 34: German Questionnaire Page 6

Fragebogen zusammenstellen × Fragebogen | Seite 6 × + ✓

← → ↻ 🔒 https://sosci.univie.ac.at/noctilucent_pea 90% ☆ 🔍 ☰

soSci
oFb - der onlineFragebogen

Im Folgenden finden Sie unterschiedliche Aussagen zum Thema Steuern. Lesen Sie die Aussagen und geben Sie an, wie sehr Sie zustimmen.
Bitte lassen Sie keine Zeile aus.

Wenn ich meine Steuern vorschriftsmäßig zahle, dann tue ich das, . . .

Ich stimme nicht zu  Ich stimme stark zu

. . . weil es für mich selbstverständlich ist.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
. . . um den Staat und andere BürgerInnen zu unterstützen.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
. . . weil ich gerne zum Wohl Aller beitrage.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
. . . weil es für mich ganz natürlich ist.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
. . . weil ich es als meine Pflicht als Bürger*In ansehe.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Weiter

B.Sc. Michael Genner – 2023

38% ausgefüllt

Figure 35: German Questionnaire Page 7

Fragebogen zusammenstellen × Fragebogen | Seite 7 × + ✓

← → ↻ 🔒 https://sosci.univie.ac.at/noctilucent_pea 90% ☆ 🔍 ☰

soSci
oFb - der onlineFragebogen

Im Folgenden finden Sie unterschiedliche Aussagen zum Thema Steuern. Lesen Sie die Aussagen und geben Sie an, wie sehr Sie zustimmen.
Bitte lassen Sie keine Zeile aus.

Wenn ich meine Steuern vorschriftsmäßig zahle, dann tue ich das, . . .

Ich stimme nicht zu  Ich stimme stark zu

. . . weil viele Steuerprüfungen stattfinden.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
. . . weil die Steuerbehörde häufig kontrolliert.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
. . . weil ich weiß, dass ich kontrolliert werde.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
. . . weil Hinterziehung sehr streng bestraft wird.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
. . . weil ich nicht genau weiß, wie ich Steuern unauffällig hinterziehen kann.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Weiter

B.Sc. Michael Genner – 2023 46% ausgefüllt

Figure 36: German Questionnaire Page 8

Fragebogen zusammenstellen x Fragebogen | Seite 8 x + v

← → ↺ 🔒 https://sosci.univie.ac.at/noctilucent_pea 90% ☆ 🔍 ☰

soSci
oFb - der onlineFragebogen

sehr unwahrscheinlich  sehr wahrscheinlich

Sie könnten sich selbst genau mit dem Steuergesetz auseinandersetzen, um nach Einsparungsmöglichkeiten zu suchen. Wie wahrscheinlich würden Sie sich genau mit dem Steuergesetz auseinandersetzen? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Sie könnten in Ihrer Privatwohnung noch Lärmschutzfenster einbauen lassen und die entstandenen Kosten als Wohnraumsanierung in Ihrer Steuererklärung geltend machen. Damit würde sich Ihre Steuerlast reduzieren. Wie wahrscheinlich würden Sie die Wohnraumsanierung vornehmen? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Sie könnten einen Kurs besuchen, der Sie über derzeitige steuerliche Absetzmöglichkeiten informiert. Wie wahrscheinlich würden Sie einen solchen Kurs besuchen? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Sie könnten geringwertige Wirtschaftsgüter (z.B.: PC, Scanner, und andere Anschaffungen unter € 400, –), die Sie jedoch zur Zeit nicht benötigen, für Ihr Unternehmen anschaffen, um Ihre Bemessungsgrundlage zu verringern. Wie wahrscheinlich würden Sie solche Güter anschaffen? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Sie könnten Bildungsausgaben, die Sie für Ihre MitarbeiterInnen hatten, als Bildungsfreibetrag von Ihrer Steuer absetzen. Wie wahrscheinlich ist es, dass Sie den Bildungsfreibetrag nutzen? ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Weiter

B.Sc. Michael Genner – 2023 54% ausgefüllt

Figure 37: German Questionnaire Page 9

Fragebogen zusammenstellen x Fragebogen | Seite 9 x + v

← → ↺ https://sosci.univie.ac.at/noctilucent_pea 90% ☆ 🔒 📄 ☰

soSci
oFb - der onlineFragebogen

sehr unwahr-scheinlich  sehr wahr-scheinlich

Eine Kundin hat bar bezahlt und keine Rechnung verlangt. Sie könnten diese Einnahme in Ihrer Steuererklärung absichtlich weglassen. Wie wahrscheinlich würden Sie diese Einnahme weglassen? ○ ○ ○ ○ ○ ○ ○ ○

Sie haben einen Teil Ihrer Ware privat eingekauft. Sie könnten diese Ware später an StammkundInnen weiterverkaufen und den dabei erzielten Gewinn in Ihrer Steuererklärung verschweigen. Wie wahrscheinlich würden Sie den erzielten Gewinn in Ihrer Steuererklärung verschweigen? ○ ○ ○ ○ ○ ○ ○ ○

Sie könnten Rechnungen von Abendessen mit Ihren FreundInnen absichtlich als Geschäftsessen deklarieren. Wie wahrscheinlich würden Sie diese Rechnungen als Geschäftsessen deklarieren? ○ ○ ○ ○ ○ ○ ○ ○

Sie waren im Ausland, um Verwandte zu treffen und eine kurze Unterredung mit einer Ihrer LieferantInnen zu führen. Trotzdem könnten Sie die Hotelkosten und das Essen, auf das Sie Ihre Verwandten eingeladen haben, als Geschäftsreise bzw. -essen deklarieren. Wie wahrscheinlich würden Sie diese Ausgaben als Geschäftsreise bzw. -essen deklarieren? ○ ○ ○ ○ ○ ○ ○ ○

Vor kurzem haben Sie im Unternehmen einer Bekannten an einem Projekt mitgearbeitet. Nun könnten Sie diesen steuerpflichtigen Zusatzverdienst in Ihrer Steuererklärung verschweigen. Wie wahrscheinlich ist es, dass Sie diesen Zusatzverdienst verschweigen? ○ ○ ○ ○ ○ ○ ○ ○

Weiter

B.Sc. Michael Genner – 2023 62% ausgefüllt

Figure 38: German Questionnaire Page 10

Fragebogen zusammenstellen × Fragebogen | Seite 10 × + ✓

← → ↻ 🔒 https://sosci.univie.ac.at/noctilucent_pea 90% ☆ 🔍 ☰

soSci
oFb - der onlineFragebogen

Ich stimme nicht zu  Ich stimme stark zu

Ich vertraue der Steuerbehörde in meinem Land. ○ ○ ○ ○ ○ ○

Weiter

B.Sc. Michael Genner – 2023 69% ausgefüllt

Figure 39: German Questionnaire Page 11 (1)

soSci
oFb - der onlineFragebogen

Welche beruflichen Qualifikationen haben Sie?

- ☐ Keine Berufsqualifikation
- ☐ Berufsausbildung mit Diplom
- ☐ Berufsbildungsprogramm/-kurs
- ☐ Abgeschlossene gewerbliche oder landwirtschaftliche Ausbildung
- ☐ Abgeschlossene kaufmännische Ausbildung
- ☐ Praktikum, praktische Ausbildung
- ☐ Spezialisierte fachliche Berufsqualifikation
- ☐ Allgemeine berufliche Qualifikation
- ☐ Meister/Fachwirt oder gleichwertiger Berufsabschluss
- ☐ Fachhochschul-/Fachhochschulabschluss
- ☐ Universitätsabschluss
- ☐ Anderer Abschluss:

Was ist Ihre höchste abgeschlossene Ausbildung?

- ☐ Derzeit Schüler*in
- ☐ Pflichtschule
- ☐ Realschulabschluss / Matura
- ☐ Allgemeines Reifezeugnis
- ☐ Fachoberschulreife (Fachhochschulreife)
- ☐ A-levels / Internationales Abitur / Internationale Matura, fachgebundene Hochschulreife
- ☐ Universitätsabschluss
- ☐ Anderer Bildungsabschluss:

Figure 40: German Questionnaire Page 11 (2)

Fragebogen zusammenstellen x Fragebogen | Seite 11 x + v

← → ↻ 🔒 https://sosci.univie.ac.at/noctilucent_pea 90% ☆ 🔒 📄 ☰

☐ Allgemeines Reifezeugnis
☐ Fachoberschulreife (Fachhochschulreife)
☐ A-levels / Internationales Abitur / Internationale Matura, fachgebundene Hochschulreife
☐ Universitätsabschluss
☐ Anderer Bildungsabschluss:

Wie hoch ist Ihr monatliches Bruttoeinkommen?
 Das Bruttoeinkommen ist definiert als Ihr Gesamteinkommen vor Abzug von Steuern und Sozialversicherungsbeiträgen.

☐ Ich habe kein eigenes Einkommen
☐ weniger als 250 €
☐ 250 € bis 500 €
☐ 500 € bis 1000 €
☐ 1000 € bis 1500 €
☐ 1500 € bis 2000 €
☐ 2000 € bis 2500 €
☐ 2500 € bis 3000 €
☐ 3000 € bis 3500 €
☐ 3500 € bis 4000 €
☐ 4000 € oder mehr

☐ Ich möchte keine Auskunft geben

Weiter

B.Sc. Michael Genner – 2023 77% ausgefüllt

Figure 41: German Questionnaire Page 12

Fragebogen zusammenstellen x Fragebogen | Seite 12 x + v

← → ↻ 🔒 https://sosci.univie.ac.at/noctilucent_pea 90% ☆ 🔒 📄 ☰

soSci
oFb - der onlineFragebogen

In welchem Land leben Sie derzeit?

Land:

☐ Ich möchte keine Auskunft geben

Welche(s) dieser Auswahlmöglichkeiten beschreibt am besten Ihre Geschlechtsidentität?

☐ Weiblich

☐ Männlich

☐ Nicht-binär

☐ Andere (bitte angeben):

☐ Ich möchte keine Auskunft geben

In welchem Jahr wurden Sie geboren?

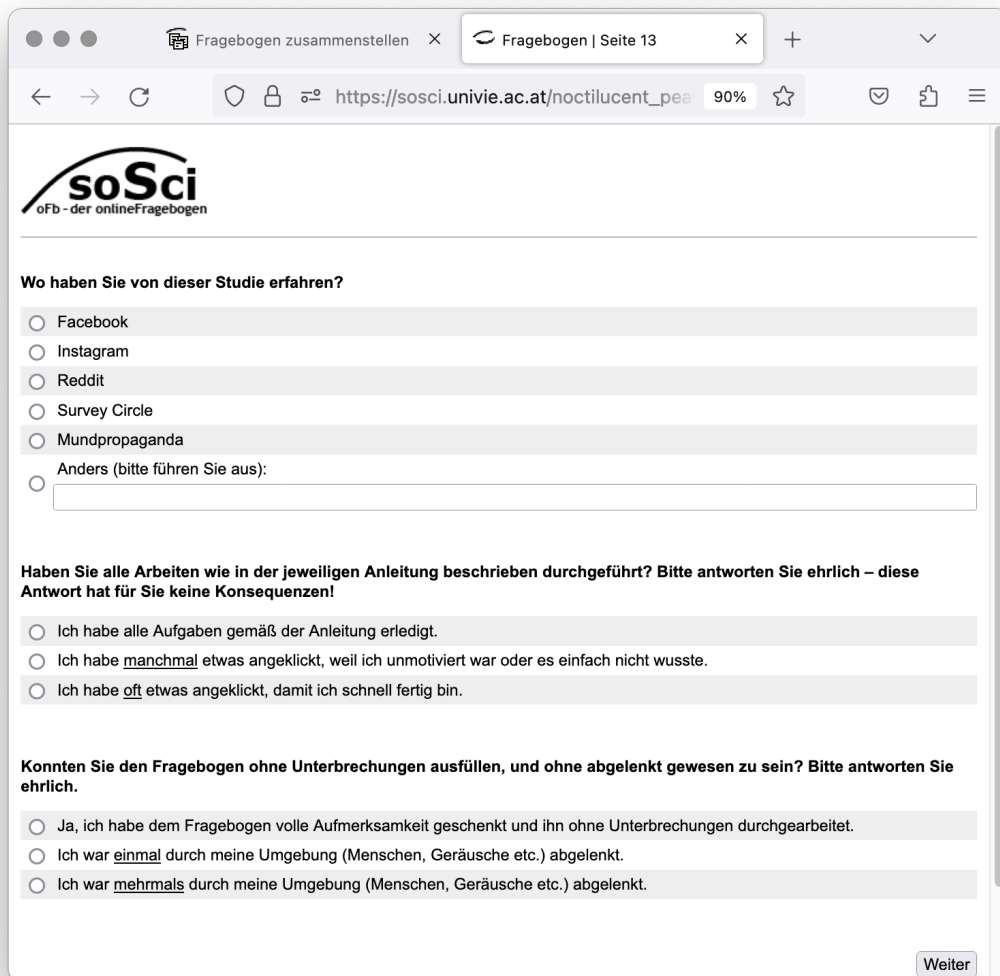
Geburtsjahr:

Weiter

B.Sc. Michael Genner – 2023

85% ausgefüllt

Figure 42: German Questionnaire Page 13



Fragebogen zusammenstellen x Fragebogen | Seite 13 x + v

← → ↺ https://sosci.univie.ac.at/noctilucent_pea 90% ☆

soSci
oFb - der onlineFragebogen

Wo haben Sie von dieser Studie erfahren?

☐ Facebook

☐ Instagram

☐ Reddit

☐ Survey Circle

☐ Mundpropaganda

☐ Anders (bitte führen Sie aus):

Haben Sie alle Arbeiten wie in der jeweiligen Anleitung beschrieben durchgeführt? Bitte antworten Sie ehrlich – diese Antwort hat für Sie keine Konsequenzen!

☐ Ich habe alle Aufgaben gemäß der Anleitung erledigt.

☐ Ich habe manchmal etwas angeklickt, weil ich unmotiviert war oder es einfach nicht wusste.

☐ Ich habe oft etwas angeklickt, damit ich schnell fertig bin.

Konnten Sie den Fragebogen ohne Unterbrechungen ausfüllen, und ohne abgelenkt gewesen zu sein? Bitte antworten Sie ehrlich.

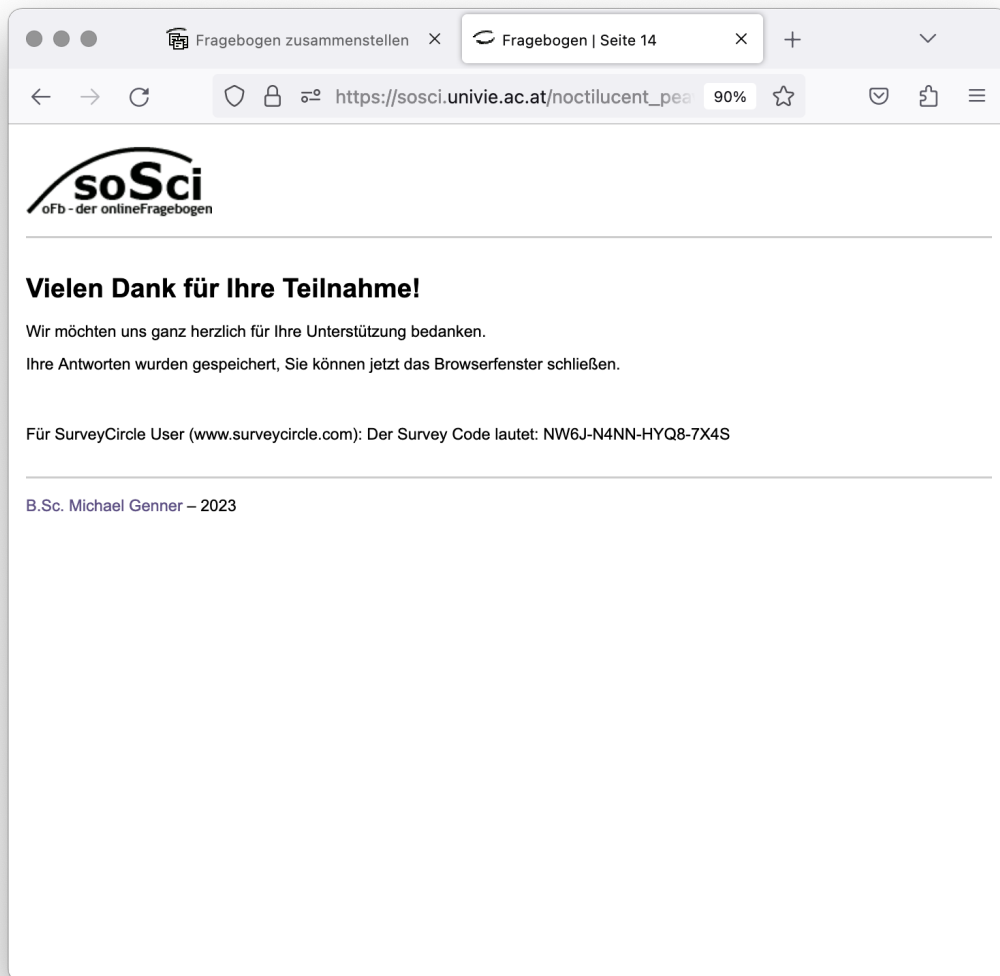
☐ Ja, ich habe dem Fragebogen volle Aufmerksamkeit geschenkt und ihn ohne Unterbrechungen durchgearbeitet.

☐ Ich war einmal durch meine Umgebung (Menschen, Geräusche etc.) abgelenkt.

☐ Ich war mehrmals durch meine Umgebung (Menschen, Geräusche etc.) abgelenkt.

Weiter

Figure 43: German Questionnaire Page 14



6.2 Tables

Table 21: Descriptive Intercorrelations – Details (Full Sample)

Variable pair	r	95% CI	p	Correlation direction
PRD and TE	.215	[.111, .315]	< .001	Positive
PRD and ETC	.171	[.066, .273]	.002	Positive
GBJW and PBJW	.423	[.332, .507]	< .001	Positive
GBJW and TA	.223	[.120, .322]	< .001	Positive
GBJW and ETC	.269	[.167, .365]	< .001	Positive
PBJW and VTC	.195	[.090, .295]	< .001	Positive
PBJW and IT	.333	[.235, .425]	< .001	Positive
TA and TE	.398	[.304, .484]	< .001	Positive
TA and ETC	.378	[.283, .466]	< .001	Positive
TE and ETC	.399	[.305, .484]	< .001	Positive
VTC and IT	.544	[.464, .615]	< .001	Positive
PRD and PBJW	−.383	[−.471, −.289]	< .001	Negative
PRD and VTC	−.160	[−.262, −.054]	.003	Negative
PRD and IT	−.216	[−.315, −.112]	< .001	Negative
TA and VTC	−.193	[−.293, −.088]	< .001	Negative
TA and IT	−.282	[−.377, −.181]	< .001	Negative
TE and VTC	−.372	[−.461, −.277]	< .001	Negative
TE and IT	−.319	[−.412, −.220]	< .001	Negative
VTC and ETC	−.349	[−.439, −.252]	< .001	Negative
ETC and IT	−.317	[−.409, −.217]	< .001	Negative
PRD and GBJW	−.094	[−.199, .012]	.083	None
PRD and TA	.052	[−.055, .157]	.344	None
GBJW and TE	.095	[−.012, .199]	.081	None
GBJW and VTC	.049	[−.058, .155]	.365	None
GBJW and IT	.052	[−.054, .158]	.336	None
PBJW and TA	−.022	[−.129, .084]	.680	None
PBJW and TE	.013	[−.094, .119]	.819	None
PBJW and ETC	.035	[−.071, .141]	.515	None

Note. Intercorrelations with their corresponding p values and CIs are descriptive in nature and therefore were constructed non-directionally. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), tax evasion (TE), voluntary tax compliance (VTC), enforced tax compliance (ETC), and institutional trust (IT).

Table 22: Descriptive Intercorrelations – Details (German Sample)

Variable pair	r	95% CI	p	Correlation direction
PRD and TE	.222	[.072, .361]	.004	Positive
GBJW and PBJW	.394	[.257, .515]	< .001	Positive
GBJW and TA	.185	[.034, .328]	.017	Positive
GBJW and ETC	.212	[.062, .352]	.006	Positive
GBJW and IT	.200	[.049, .341]	.010	Positive
PBJW and IT	.251	[.103, .388]	.001	Positive
TA and TE	.171	[.020, .315]	.027	Positive
TA and ETC	.166	[.014, .310]	.032	Positive
TE and ETC	.347	[.206, .474]	< .001	Positive
VTC and IT	.492	[.368, .599]	< .001	Positive
PRD and PBJW	−.380	[−.502, −.242]	< .001	Negative
PRD and IT	−.181	[−.324, −.030]	.019	Negative
TE and VTC	−.246	[−.384, −.098]	.001	Negative
TE and IT	−.168	[−.312, −.017]	.030	Negative
VTC and ETC	−.317	[−.447, −.173]	< .001	Negative
ETC and IT	−.279	[−.414, −.133]	< .001	Negative
PRD and GBJW	−.091	[−.240, .061]	.240	None
PRD and TA	−.003	[−.155, .149]	.968	None
PRD and VTC	−.139	[−.285, .013]	.073	None
PRD and ETC	.150	[−.001, .296]	.052	None
GBJW and TE	.053	[−.099, .204]	.494	None
GBJW and VTC	.105	[−.047, .253]	.175	None
PBJW and TA	−.025	[−.177, .127]	.745	None
PBJW and TE	.091	[−.062, .239]	.244	None
PBJW and VTC	.105	[−.048, .253]	.177	None
PBJW and ETC	.072	[−.081, .221]	.357	None
TA and VTC	−.096	[−.244, .057]	.217	None
TA and IT	−.091	[−.240, .062]	.242	None

Note. Intercorrelations with their corresponding p values and CIs are descriptive in nature and therefore were constructed non-directionally. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), tax evasion (TE), voluntary tax compliance (VTC), enforced tax compliance (ETC), and institutional trust (IT).

Table 23: Descriptive Intercorrelations – Details (English Sample)

Variable pair	r	95% CI	p	Correlation direction
PRD and TE	.207	[.059, .346]	.006	Positive
PRD and ETC	.182	[.033, .323]	.017	Positive
GBJW and PBJW	.560	[.448, .655]	< .001	Positive
GBJW and ETC	.185	[.037, .326]	.015	Positive
GBJW and IT	.192	[.044, .332]	.012	Positive
PBJW and VTC	.235	[.088, .371]	.002	Positive
PBJW and IT	.367	[.231, .490]	< .001	Positive
TA and TE	.454	[.327, .566]	< .001	Positive
TA and ETC	.409	[.277, .527]	< .001	Positive
TE and ETC	.321	[.180, .449]	< .001	Positive
VTC and IT	.520	[.401, .621]	< .001	Positive
PRD and PBJW	−.383	[−.504, −.248]	< .001	Negative
PRD and VTC	−.168	[−.310, −.019]	.027	Negative
PRD and IT	−.253	[−.388, −.108]	< .001	Negative
TA and IT	−.196	[−.336, −.048]	.010	Negative
TE and VTC	−.386	[−.506, −.251]	< .001	Negative
TE and IT	−.254	[−.389, −.108]	< .001	Negative
VTC and ETC	−.285	[−.416, −.141]	< .001	Negative
ETC and IT	−.153	[−.296, −.004]	.045	Negative
PRD and GBJW	−.129	[−.274, .021]	.091	None
PRD and TA	.082	[−.068, .229]	.284	None
GBJW and TA	.095	[−.056, .241]	.216	None
GBJW and TE	−.016	[−.165, .134]	.838	None
GBJW and VTC	.128	[−.022, .273]	.093	None
PBJW and TA	.079	[−.071, .226]	.302	None
PBJW and TE	.022	[−.128, .171]	.776	None
PBJW and ETC	.091	[−.059, .238]	.233	None
TA and VTC	−.144	[−.287, .006]	.060	None

Note. Intercorrelations with their corresponding p values and CIs are descriptive in nature and therefore were constructed non-directionally. Included constructs: personal relative deprivation (PRD), general belief in a just world (GBJW), personal belief in a just world (PBJW), tax avoidance (TA), tax evasion (TE), voluntary tax compliance (VTC), enforced tax compliance (ETC), and institutional trust (IT).

6.3 Abstract (English)

The justice motive describes an individual's motivation to act on perceived threats to justice, in order to restore it, either externally by taking action, or internally by constructing justifications. Several decades of research have found the justice motive to be linked with various domains of human experience and behavior. This study aimed to investigate a link between the justice motive and tax compliance. The justice motive was operationalized through the constructs belief in a just world and personal relative deprivation. Belief in a just world was differentiated into general belief in a just world and personal belief in a just world. Tax compliance was operationalized through noncompliance measures – tax avoidance and tax evasion. Simple moderation models were constructed, in which negative relationships between personal relative deprivation and tax compliance are weakened by belief in a just world. A convenience sample of 339 self-employed participants was procured with social media, word of mouth, and professional associations and networks. Participation occurred via an online survey, which was conducted in English and German over a period of five months. A link between personal relative deprivation and tax evasion was found, but no other effects could be substantiated regarding the study hypotheses. Some exploratory results yielded promising avenues for future research, such as a significant positive correlation between general belief in a just world and tax avoidance, and a strong moderating effect of general belief in a just world, reversing the relationship of personal relative deprivation on tax avoidance.

Keywords: tax compliance, justice motive, belief in a just world, relative deprivation

6.4 Abstract (German)

Das Gerechtigkeitsmotiv beschreibt die Motivation eines Individuums, auf die wahrgenommene Bedrohung von Gerechtigkeit zu reagieren, um diese wiederherzustellen. Dies kann entweder external, durch aktives Handeln geschehen oder internal, durch die Konstruktion von Rechtfertigungen. In den letzten Jahrzehnten konnten zahlreiche Verbindungen zwischen dem Gerechtigkeitsmotiv und diversen Bereichen menschlichen Erlebens und Verhaltens belegt werden. Diese Studie hatte zum Ziel, eine mögliche Verbindung zwischen dem Gerechtigkeitsmotiv und Steuerehrlichkeit zu untersuchen. Das Gerechtigkeitsmotiv wurde durch die Konstrukte Glaube an eine gerechte Welt und persönliche relative Deprivation operationalisiert. Der Glaube an eine gerechte Welt wurde differenziert in den Glauben an eine allgemein gerechte Welt und den Glauben an eine persönlich gerechte Welt. Steuerehrlichkeit wurde mittels Skalen für Steuerunehrlichkeit operationalisiert – Steuervermeidung und Steuerhinterziehung. Einfache Moderationsmodelle wurden erstellt, in welchen negative Zusammenhänge zwischen persönlicher relativer Deprivation und Steuerehrlichkeit durch den Glauben an eine gerechte Welt verringert werden. Eine Gelegenheitsstichprobe in der Größe von 339 selbstständig beschäftigten Teilnehmer*innen wurde mithilfe von sozialen Medien, Mundpropaganda sowie Berufsnetzwerken rekrutiert. Die Teilnahme an der Studie erfolgte mittels Online-Befragung über einen Zeitraum von fünf Monaten. Ein Zusammenhang zwischen persönlicher relativer Deprivation und Steuerhinterziehung wurde gefunden, allerdings konnten abgesehen davon keine anderen Effekte hinsichtlich der Studienhypothesen belegt werden. Einige Ergebnisse der Exploration lieferten vielversprechende Ausgangspunkte für die weitere Forschung, wie etwa eine signifikante Korrelation zwischen dem Glauben an eine allgemein gerechte Welt und Steuervermeidung sowie ein starker Moderationseffekt des Glaubens an eine allgemein gerechte Welt, welcher den Zusammenhang zwischen persönlicher relativer Deprivation und Steuervermeidung umkehrt.

Schlagworte: Steuerehrlichkeit, Gerechtigkeitsmotiv, Glaube an eine gerechte Welt, relative Deprivation

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9 List of Abbreviations

ETC	enforced tax compliance
GBJW	general belief in a just world
IT	institutional trust
PBJW	personal belief in a just world
PRD	personal relative deprivation
RD	relative deprivation
TA	tax avoidance
TAX-I	tax compliance inventory
TE	tax evasion
VIF	variance inflation factor
VTC	voluntary tax compliance